Eastside Transit Corridor Phase 2 Draft Environmental Impact Statement/ Environmental Impact Report

APPENDIX E

PURPOSE AND NEED REPORT

State Clearinghouse Number: 2010011062

APPENDIX E

Addendum to the Purpose and Need Report Purpose and Need Report



Addendum to the Purpose and Need Statement Technical Memorandum

June 27, 2014

Prepared for

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ACRONYMS AND ABBREVIATIONS LIST

There are no changes to this section.



1.0.A SUMMARY

Addenda have been prepared to technical memoranda on environmental topics that have had substantive updates during preparation of the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR). The addenda are meant to supplement the original technical memoranda and, where relevant, the information provided in the addenda supersedes obsolete information in the original memoranda. Substantive updates occurred as a result of, but not limited to, the following reasons: substantive input provided by cooperating agencies; 2012-2035 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), which was adopted after the original technical memoranda were prepared; updates to the project construction schedule and methods which were refined based on project evolution and input from cooperating agencies; 2011 Whittier Narrows Dam Basin Master Plan, which was adopted after the original technical memoranda were prepared; and 2010 Census update, which was unavailable at the time the original technical memoranda were prepared. The addenda follow the same outline as the original technical memoranda. An "A" is included after each section number in this addendum to differentiate sections in the addenda from sections in the original technical memorandum. Only discussions where updates have been made are included in this addendum.

Sections of the Updated Purpose and Need Statement Technical Memorandum (December 30, 2011) have been updated based on SCAG's 2012-2035 RTP/SCS which was adopted in April 2012 and the 2010 Census information, after the original technical memorandum was prepared.

While the data underlying the purpose and need have been updated based on the 2010 Census data and SCAG's 2012-2035 RTP/SCS, the substance and conclusions of the project's Purpose and Need remains unchanged by this Addendum.

1.1.A Introduction

The Eastside Transit Corridor Phase 2 Project's purpose and need remains consistent with the Updated Purpose and Need Statement Technical Memorandum (December 30, 2011). However at the time the Purpose and Need was developed, 2010 United States Census Data was not yet released to the general public; therefore, the analysis within the original Technical Memoranda was based on Year 2000 Census Data. The United States Census Bureau has since released 2010 Census data (released in 2011), and therefore available demographic data for population, employment and transit dependency factors has been updated using 2010 baseline data. Key assumptions for this updated data include:

- Population and employment data for Los Angeles County (including the study area) is provided by SCAG and based on 2010 Census data. SCAG data provides current and future year projections. Population and employment data at the 2010 census tract level was updated subject to the availability of information provided by SCAG.
- Traffic and congestion management information is based on SCAG 2012-2035RTP data.
- Travel demand information is based on Metro Model data. Travel demand and travel market information was updated for 2035 conditions, based on availability of information from the Metro Model which was consistent with the 2012-2035 RTP/SCS.



1.2.A Project Purpose

The only updates to this section are to the following project area attributes.

For the Eastside Transit Corridor Phase 2 Project, compared to year 2006, year 2035 projections have a 5 percent population growth (totaling around 760,000 people) and 1.1 percent job growth. The number of trips within the project area includes 44 percent internal trips.

1.3.A Project Area Location and Demographics

The following project area attributes have been updated to reflect 2010 Census data.

The project area demographic and transit dependency factors are summarized below:

- Low-income households comprise 16 percent of the total households, which is higher than the county average of 13 percent.
- 38 percent of the population is age 18 and younger, or age 65 and older.
- Approximately 12 percent of households in the project area had zero-vehicles in 2010: higher than the county average, with some of the highest concentrations in the western and central portions of the project area.

1.4.A The Mobility Problem

The following project area attributes have been updated to reflect 2010 Census data.

Continuing transit-dependent population – The project area has a significant level of transit-dependent residents who need convenient and reliable transit options to get them where they want and need to go; 38 percent of the project area population is under age 18 or over age 65, 16 percent of households are categorized as low-income, and 12 percent of all households have zero-vehicles. In addition, the Metro Model suggests that corridor transit demand is estimated to increase by approximately 19 percent overall by 2035¹.

1

¹ Los Angeles County Regional Travel Demand Model (Metro Model).



2.0.A HISTORY AND BACKGROUND

This section has been updated to provide information regarding SCAG's 2012-2035 RTP/SCS. Information about SCAG's 2012-2035 RTP/SCS supersedes the discussion of SCAG's 2008 RTP in the original technical memorandum.

SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

The Eastside Transit Corridor Phase 2 Project was included in the SCAG's 2012-2035 RTP/SCS adopted in April, 2012. The RTP/SCS describes projects and corridor concepts in and around the project study area aimed at maximizing the effectiveness, safety, and reliability of Southern California's transportation system. Near the project study area, there is funding to conduct planning and environmental studies for widening Interstate 5 (I-5) and adding one high-occupancy vehicle (HOV) lane in each direction from Interstate 605 (I-605) to I-710. However, as there are no plans to widen I-5 to the west approaching downtown Los Angeles, these improvements would not improve access to principal destinations for travel generated within the Eastside Transit Corridor Phase 2 project study area.

Future corridor concepts include the East-West Freight Corridor that would run parallel to the Union Pacific Railroad Los Angeles Subdivision before following a route adjacent to State Route 60 (SR 60) east of SR 57. Regional improvements to accommodate goods movement would not materially improve conditions for commuter and other home-based trips generated to or from destinations within the project study area.

The RTP/SCS's Strategic Plan describes unfunded operational and capital improvements (financially unconstrained plans and projects). Near the project study area, the Strategic Plan lists HOV lanes on SR 60 from US 101 to I-605 and interchange improvements at SR 60/I-605. Improvements along the SR 60 may improve safety and access to principal destinations for travel generated within the Eastside Transit Corridor Phase 2 project study area in the future. However, since it is not listed under Metro's Long Range Transportation Plan (LRTP), the Strategic Plan describes these projects as unfunded with no anticipated date of implementation and no engineering efforts are underway at the time of completion of this addendum.



3.0.A TRANSPORTATION FACILITIES AND SERVICES

Information contained in this section supersedes information provided in the original technical memorandum, where applicable.

3.1.A The Regional Transit Context

There are no updates to this section.

3.1.1.A Metro Rail

There are no updates to this section.

3.2.A Transportation Facilities and Services within Project Area

3.2.1A Bus

There are no updates to this section.

3.2.2A Commuter Rail

There are no updates to this section.

3.3A Transportation System Performance

This section has been updated based on the SCAG 2012-2035 RTP/SCS.

Regional transportation planning for Southern California's six-county area is the responsibility of SCAG, which is the Metropolitan Planning Organization (MPO) for the area. In April 2012, the SCAGRegional Council adopted the 2012-2015 RTP/SCS to establish the goals, objectives, and policies for the transportation system, as well as to establish the implementation plan for transportation investments in the Southern California area.

The RTP/SCS includes regional performance indicators with objectives that transportation investments can be measured against. The performance indicators, based on the 2008 base year scenario, illustrate that some travel conditions in the project area will worsen by 2035 and the area will not meet regional objectives for mobility and accessibility without the implementation of additional transportation improvements. This conclusion is supported by the data provided below describing the performance of the roadway and transit systems serving the project area.

3.3.1A Traffic Volumes and Operating Conditions

There are no updates to this section.

3.3.1.1A Freeways

The following Average Annual Daily Traffic (AADT) volumes for each freeway segment that serves the project area have been updated in this section. The following are the AADT for 2010 conditions.



Table 3-2A presents the updated Caltrans 2010 Annual Average Daily Traffic (AADT).

Table 3-2A. Caltrans 2010 Annual Average Daily Traffic (AADT)

Freeway Name	Limits	2010 Average Daily Traffic	2035 Average Daily Traffic
SR 60	I-605 to I-5	215,000	231,000
I-10	I-605 to I-5	225,000	292,000
I-5	I-605 to I-10	259,000	291,000
I-710	I-10 to I-5	185,000	193,000
I-605	I-10 to I-5	243,000	299,000

Source: Metro Model, SCAG 2012 RTP. Traffic volumes represent the average flows on several freeway links between the limits stated. The links used are only those between intersections; links within intersections (such as between freeway ramps) were not included.

3.3.1.2A Arterials

The following total daily traffic volumes for the primary arterials in the project area have been updated. Table 3-3A shows the existing 2010 average daily traffic on primary arterials in the project area.

Table 3-3A. Existing Average Daily Traffic Volumes for Primary Arterials in the Project Area

Street Name	Count Location	Total Daily Volume (2010)
North-South Arterials		
Atlantic Boulevard	South of Beverly Boulevard	35,728
Wilcox Avenue	South of Via Campo	28,113
San Gabriel Boulevard	South of SR 60 Freeway	17,473
Paramount Boulevard	South of SR 60 Freeway	32,412
Rosemead Boulevard	South of San Gabriel Boulevard	43,462
Garfield Avenue	South of Olympic Boulevard	32,977
Montebello Boulevard	East of Liberty Avenue	32,812
Santa Anita Avenue	North of Durfee Avenue	6,475
Pioneer Boulevard	North of Washington Blvd.	18,568



Table 3-3A. Existing Average Daily Traffic Volumes for Primary Arterials in the Project Area

Street Name	Count Location	Total Daily Volume (2010)
Norwalk Boulevard	South of Washington Boulevard	26,163
East-West Arterials		
Pomona Blvd.	East of Atlantic Blvd.	13,938
Via Campo	West of Wilcox Avenue	28,853
Beverly Blvd.	West of Garfield Avenue	22,958
Whittier Blvd.	East of Garfield Avenue	28,874
Olympic Blvd.	East of Garfield Avenue	20,652
Washington Blvd.	West of Pioneer Blvd.	48,879

Source: AECOM 2010; Los Angeles County 2007; Montebello Hills Specific Plan 2009; Whittier 2006 Engineering and Traffic Survey Summary.

3.3.2A Transit System and Operating Conditions

There are no updates to this section.

3.3.2.1A Transit System Speeds and Travel Times

There are no updates to this section.

3.3.2.2A Transit Accessibility and Connectivity

There are no updates to this section.

3.3.2.3A Transit Reliability

There are no updates to this section.

3.3.3A Regional Objectives

The following regional performance indicators have been updated based on the SCAG 2012-2035 RTP/SCS.

Table 3-7A presents SCAG performance indicators updated with 2008 base year results, 2035 baseline projections, and 2035 objectives.



Table 3-7A. SCAG Performance Indicators

Performance Indicator	Performance Me	2008 Base Year	2035 Baseline	2035 Plan Objectives	
Mobility	Average daily speed (miles per hour)		32.5 mph	29.6 mph	34.7 mph
Mobility	Average daily delay per capita		17.3 minutes	23.8 minutes	13.1 minutes
Accessibility	Percent PM peak period work trips within 45 minutes of residence	Autos: Transit:	79% 24%	79% 22%	85% 23%
Reliability	Percent variation in travel time*	Weekday after 5:00 PM	38%	N/A	N/A
Safety	Accident rate per million VMT for Highways		1.5 (2009)	N/A	N/A

Source: SCAG, 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy, Highway and Arterials Appendix, Performance Measures Appendix.

Estimated from graph.

² Percent variation in travel time means day-to-day change in travel time experienced by travelers. Variability results from accidents, weather, road closures, system problems, and other non-recurrent conditions. Reliability can only be monitored and not forecasted. This is because travel demand models cannot evaluate variations in travel times, but can only estimate average travel times and delay.



4.0.A PURPOSE, GOALS, AND OBJECTIVES OF THE PROPOSED ALTERNATIVES

There only changes to this section are updates to the following objectives:

- Serve the large number of transit-dependent and low-income populations in the project area;
 and
- Provide regional transit connectivity with the Metro Gold Line Eastside Extension and Measure R projects.



5.0.A MAJOR THEMES SUPPORTING THE NEED FOR TRANSIT IMPROVEMENTS

Updates to this section are based on the 2010 Census data. There are no updates to the seven major themes that reinforce the need to provide a transit improvement within the project area. Information contained in the following sections supersedes information provided in the original technical memorandum, where applicable.

5.1.A Peak-Hour Congestion on Roadway Network

There are no updates to this section.

5.2.A High Travel Demand, Limited Travel Options, and Constrained Connectivity

Where appropriate, information for the 2035 forecast was updated to reflect the 2012 SCAG RTP model. The findings do not affect the conclusions of the EIS/EIR.

5.2.1.A Person Trips

The patterns for all-purpose person trips have been updated and indicate the following:

- In 2035, the project area all-purpose trips rise to 47 percent compared to 2006 conditions.
- Of the remaining 53 percent of daily trips in 2035, the main destination districts have changed in Central Los Angeles (12 percent) and Gateway (14 percent)² compared to 2006 conditions.

5.2.2.A Transit Trips

The patterns for transit trip making activity for the project area have been updated and indicate the following:

- The total number of daily trips is projected to increase to 141,000 in 2035. The percent of the projected all-purpose transit trips remaining in the project area is projected to increase to 30 percent by 2035.
- The main destination districts³ in 2006/2035 for the remaining 74/70 percent of the daily trips originating in the area included Central Los Angeles (21/18 percent), Gateway (9/9 percent), Westside (8/9 percent), Central Business District (11/9percent), and West San Gabriel Valley (8/9 percent).

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² Original technical memorandum cites of the 55 percent of the daily trips originating in the project area, 11 percent are Central Los Angeles and 12 percent are Gateway. All other daily trip origins are unchanged.

³ Destination districts in this case are those outside the project area, which are compiled by an aggregate of Transportation Analysis Zones (TAZs).



The main production districts⁴ in 2006/2035 for trips attracted to the project area (apart from the project area) have been updated for Central Los Angeles (18/17 percent).

5.3.A The Concentration of Activity Centers

There are no updates to this section.

5.4.A Transit-Dependent Populations and Transit Usage

Demographics provided below have been updated based on the 2010 Census data.

As of 2010, more than 38 percent of the project area population is under the age of 18 or over 65. In addition, 16 percent of the population is low-income, and 12 percent does not have access to a vehicle.

5.4.1.A Zero-Vehicle Households

Updates using the 2010 Census data are reflected below. The updates do not change the conclusions of the EIS/EIR.

Approximately 13 percent of Los Angeles County households are without a vehicle. Approximately 12 percent of households in the project area have of zero-vehicles.

5.4.2.A Low-Income Households

Updates using the 2010 Census data are reflected below. The updates do not change the conclusions of the EIS/EIR.

Approximately 13 percent of Los Angeles County households are low-income. Approximately 16 percent of households in the project area are low income.

5.4.3.A. Median Household Income

There are no updates to this section as it would not affect the analysis or conclusions of the EIS/EIR.

5.4.4.A Summary of Transit Dependency

There are no updates to this section as it would not affect the analysis or conclusions of the EIS/EIR.

5.5.A Growing Population, Employment, and Housing Densities Support Transit Usage

This section has been updated based on 2010 Census data information. Associated population and employment density Figure 5-13A and Figure 5-15A have also been updated based on 2010 Census data.

6/27/2014

⁴ Production Districts are those areas outside of the project area where people live, which are compiled by an aggregate of TAZs.



SCAG projections estimate that by 2035, the population for the project area will grow by 5 percent, roughly 759,992.

5.5.1.A Population

The associated population and employment densities presented in Figure 5-13A and Figure 5-15A were updated based on Census 2010 data.

Total population for the project study area in 2010 was approximately 721,000 or seven percent of the population of Los Angeles County.

5.5.2.A Employment

The associated population and employment densities presented in Figure 5-13A and Figure 5-15A were updated based on Census 2010 data.

Total employment in the project area in 2010 reached 311,000 jobs. It is projected to grow to 315,019 jobs by 2035. This represents a 1.1 percent increase in employment within the project area.

5.5.3.A Households

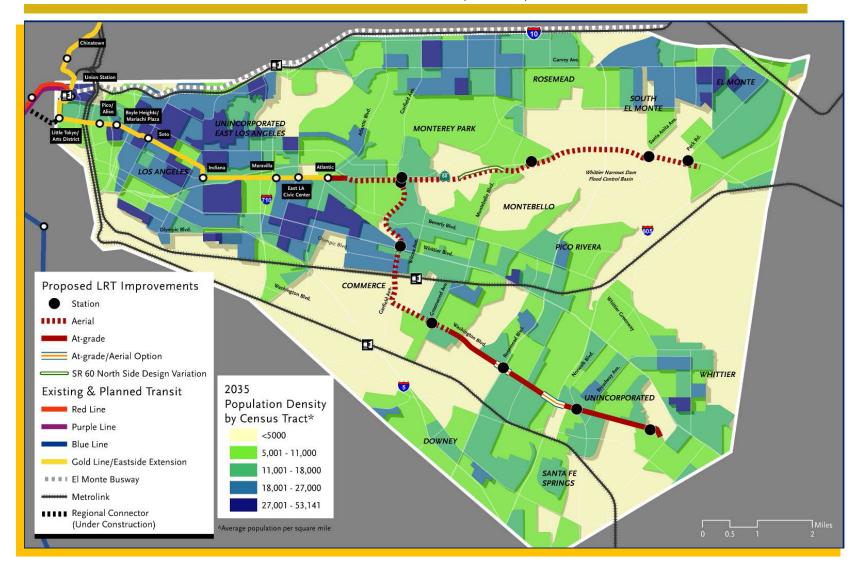
There are no updated to this section.

5.6.A Transit-Supportive Land Use Policies and Conditions

There are no updated to this section.

5.7.A Environmental Benefits Addressing Air Quality and State Mandates

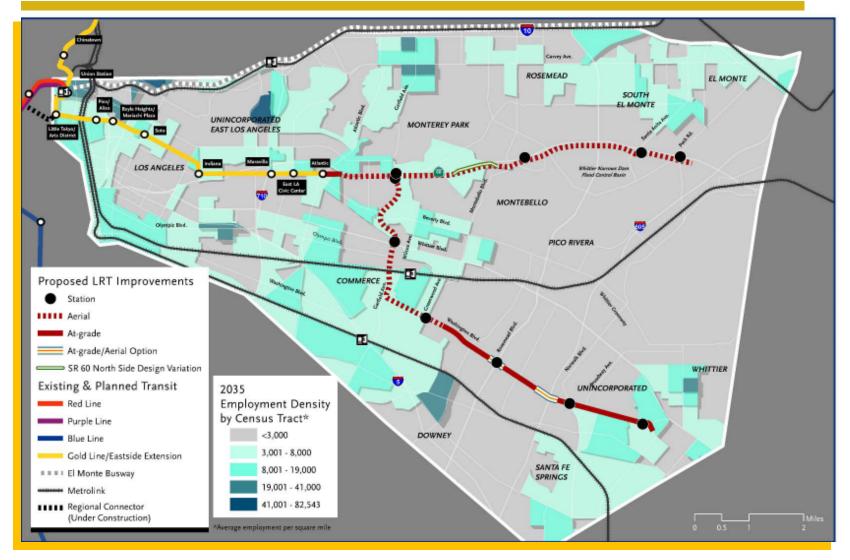
There are no updated to this section.



Source: SCAG 2012 RTP projections based on 2010 Census Data, 2007; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-13A. 2035 Population Density





Source: SCAG 2012 RTP projections based on 2010 Census Data, 2010; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-15A. 2035 Employment Density



6.0.A POTENTIAL TRANSIT MARKETS

Information contained in this section supersedes information provided in the original technical memorandum, where applicable.

6.1.A Activity Centers and Destinations

There are no updates to this section.

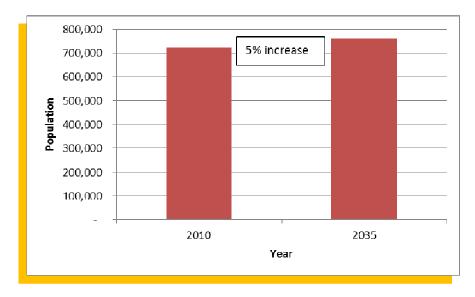
6.2.A Adjacent Districts and Regional Destinations

There are no updates to this section.

6.3.A Population

Updates to Census 2010 numbers have resulted in updates to Figure 6-3A and associated population growth text below.

The population of the project area in 2010 was approximately 721,000, seven percent of the population of Los Angeles County. SCAG projections estimate that by 2035, the population will grow by 5 percent, reaching roughly 759,992 by 2035.



Source: U.S. Census 2010, SCAG 2012 RTP projections. Graphic prepared by CDM/AECOM Joint Venture, 2013

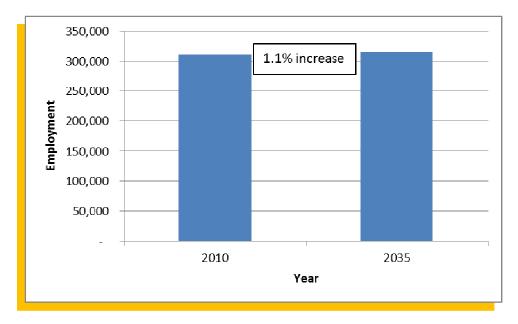
Figure 6-3A. Population Growth for Project Area 2010-2035

6.4.A Employment

Updates to Census 2010 numbers have resulted in updates to Figure 6-5A and associated population growth text below.



There are approximately 311,000 jobs in the project area. This number is projected to increase by 1.1 percent to roughly 315,019, by 2035. Los Angeles County's employment rate is estimated to increase by eleven percent within the same period.

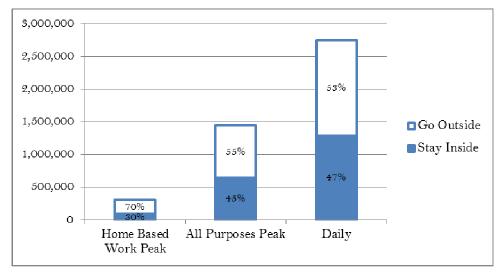


Source: U.S. Census 2010, SCAG 2012 RTP projections. Graphic prepared by CDM/AECOM Joint Venture, 2013

Figure 6-5A. Employment Growth for Project Area 2010-2035

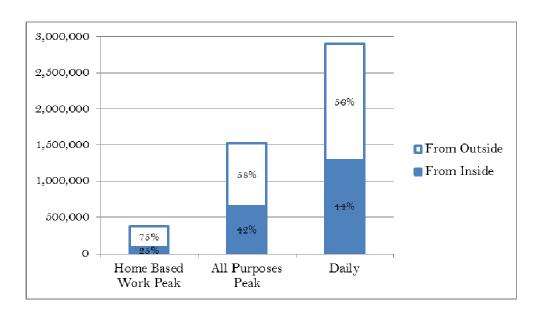
6.5.A Travel Demand and Patterns

Information presented in Figures 6-7A and 6-8A below has been updated to reflect 2035 projected year data based on the Metro model and the SCAG 2012-2035 RTP/SCS. The updates do not affect conclusions of the EIS/EIR.



Source: Metro Travel Demand Model, SCAG 2012 RTP; prepared by CDM/AECOM Joint Venture, 2012.

Figure 6-7A. Person Trips Produced by the Project Area, Year 2035



Source: Metro Travel Demand Model, SCAG 2012 RTP; prepared by CDM/AECOM Joint Venture, 2012.

Figure 6-8A. Person Trips Attracted by the Project Area, Year 2035

6.5.1.A Daily Trips

Information in this section was updated to reflect 2035 projected year data based on the Metro model and the SCAG 2012-2035 RTP/SCS. Updates are reflected in the text and Table 6-2A below. The updates do not affect conclusions of the EIS/EIR.



Table 6-2A presents 2035 Daily Person Trips for top destination/origin districts in the Project Area. This is approximately 85 percent of all project area trips.

Table 6-2A. Top Destination/Origin Districts for Project Area, Year 2035 Daily Person Trips

Daily	Rank	1	2	3	4	5
Top Districts to Attract Trips Produced by the Project Area	District Name	Project Area	Central Los Angeles	Gateway	West San Gabriel Valley	East San Gabriel Valley
	Trips	1,290,489	323,526	319,013	245,203	163,816
	Percent	46%	12%	12%	9%	6%
Top Districts to Produce Trips Attracted by the Project Area	District Name	Project Area	Gateway	West San Gabriel Valley	Central Los Angeles	East San Gabriel Valley
	Trips	1,290,489	399,320	290,153	280,691	171,049
	Percent	44%	14%	10%	10%	6%

Source: Metro Travel Demand model; prepared by CDM/AECOM Joint Venture, 2013

The project area produced and attracted approximately 3.7 million all-purpose trips in 2006. This is expected to grow to 4.4 million daily trips by 2035. Nearly half (44 percent) of these trips stayed within the project area; this is projected to rise to 47 percent by 2035. See Figures 6-7A and 6-8A for a summary of all project area trips.

6.5.2.A Transit Trips

Information in this section was updated to reflect 2035 projected year data based on the Metro model and the SCAG 2012-2035 RTP/SCS. These updates do not affect conclusions of the EIS/EIR.

In 2006, the project area produced and attracted a total of approximately 114,000 all-purpose transit trips. This is projected to increase by 24 percent to 141,000 by 2035.

Approximately 26 percent of transit trips that originated in the project area remained in the area. This proportion is projected to increase to 30 percent by 2035.

6.6.A Summary of Travel Markets

Information in this section was updated to reflect 2035 projected year data based on the Metro model and the SCAG 2012-2035 RTP/SCS. The updates do not affect conclusions of the EIS/EIR.

Current travel demand is expected to increase 30 percent by 2035 for the Eastside Transit Corridor Phase 2 project area. These are summarized below:



- Trips Produced/Attracted to the Project Area- The project area attracted and produced approximately 3.7 million all-purpose trips in 2006. This is expected to grow significantly to 4.4 million daily trips by 2035. In 2006, a large share of these trips remained within the project area (44 percent) a condition that is projected to increase. Population and employment growth are contributing factors.
- Transit Trips Produced/Attracted to the Project Area- in 2006, the project area produced or attracted a total of 114,000 all-purpose transit trips, and 26 percent remained within the project area. This is forecast to increase to 30 percent by 2035. This trend can be attributed to the activity centers within the project area.



7.0.A SUMMARY OF PURPOSE AND NEED

There are no updates to this section.



8.0.A REFERENCES

The following reference updates have been included to site updated data and/or reports since preparation of the original technical memorandum. This information is in addition to, and does not supersede, information provided in the original technical memorandum.

Southern California Association of Governments (SCAG). 2012. 2012-2035 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) and Model. April.

United States Census Bureau, American FactFinder. 2010. Summary Files 1 and 2. Available at: http://factfinder.census.gov.

American Community Survey, American FactFinder. 2011. Available at: http://factfinder.census.gov.



Eastside Transit Corridor Phase 2

Updated Purpose and Need Statement Technical Memorandum

December 30, 2011

Prepared for

Los Angeles County Metropolitan Transportation Authority

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ACRONYMS AND ABBREVIATIONS LIST

AB Assembly Bill

AADT Annual Average Daily Traffic

CAA Federal Clean Air Act

CAAQS California Ambient Air Quality Standards

CARB California Air Resources Board

CBD Central Business District

CMP Congestion Management Program

CO Carbon Monoxide

CSULA California State University, Los Angeles

CSULB California State University, Long Beach

EIR Environmental Impact Report

EIS Environmental Impact Statement

FTA Federal Transit Administration

HOV High-occupancy vehicle

LACDPW Los Angeles County Department of Public Works

LOS Level of Service

LRT Light Rail Transit

Metro Los Angeles County Metropolitan Transportation Authority

mph Miles per Hour

MPO Metropolitan Planning Organization

NAAQS National Ambient Air Quality Standards

O₃ Ozone



OII Operating Industries Incorporated

PIH Presbyterian Intercommunity Hospital

PM Particulate Matter

RTP Regional Transportation Plan

SB Senate Bill

SCAB South Coast Air Basin

SCAG Southern California Association of Governments

SCRAA Southern California Regional Rail Authority

SR State Route

TAZ Transportation Analysis Zone

TSM Transportation Systems Management

UCLA University of California, Los Angeles

USC University of Southern California

USEPA United States Environmental Protection Agency

VMT Vehicle Miles Traveled



1.0 PURPOSE AND NEED

1.1 Introduction

This report describes the purpose and need for improved transit investments in the Eastside Transit Corridor Phase 2 project area. The project encompasses an 82-square-mile area in the eastern portion of Los Angeles County with a population of over 700,000 people. The population and size of the project area surpasses that of other urban U.S. cities with extensive transit networks.

The Eastside Transit Corridor Phase 2 is a project planned by the Los Angeles County Metropolitan Transportation Authority (Metro) designed to connect to the existing phase of the Metro Gold Line Eastside Extension.

The first phase of the project is a six mile, eight-station light rail transit (LRT) line that began operations in November 2009. This current Metro Gold Line Eastside Extension directly interfaces with the Metro Gold Line service to Pasadena, providing residents of East Los Angeles with a direct connection to the region's Metro Rail system. Approximately 24,000 daily riders are expected to utilize the first phase of the Eastside Extension by the year 2035.

The Eastside Transit Corridor Phase 2 project is identified in the Metro Long Range Transportation Plan and has been selected as one of the many transit and highway projects to receive Measure R funding. Measure R was approved by the voters of Los Angeles County in November 2008, and imposes a one-half of one percent (0.5%) sales tax for a period of 30 years to finance traffic relief and transportation upgrades throughout the county.

1.2 Project Purpose

The purpose of the Eastside Transit Corridor Phase 2 Project is to provide a transit connection to the Metro Gold Line Eastside Extension and link communities farther east to the regional transit network.

In doing so, the project would improve mobility within the project area and offer a more sustainable transit alternative to meet the demands of the area's growth. The project proposes to improve eastwest transit service beyond the first phase of the Eastside Extension, connecting residents within the Eastside Transit Corridor Phase 2 project area to major employment centers and regional destinations currently accessible by the buses and private vehicles operating on the area's congested arterial and roadway network.

There are a number of factors supporting the need for the Eastside Transit Corridor Phase 2 Project, including mobility and accessibility issues stemming from existing high population density and moderate employment density; year 2035 projections of 12 percent population growth (totaling more than 800,000 people) and seven percent job growth (totaling more than 300,000 jobs), compounding mobility and accessibility issues; and the high number of trips within the project area (45 percent internal trips) and trips between the project area and Central Los Angeles¹, the county's largest employment center, which (55 percent external trips) will intensify already high levels of automobile congestion and travel delay on local arterial and freeway networks, and is anticipated to significantly

¹ Unless otherwise noted, reference to Central Los Angeles also includes the Central Business District.



reduce peak period travel speeds by 2035 (decreasing 18 percent in the morning and 24 percent in the afternoon).

Combined, these factors illustrate the mobility problem within the project area and present a case for a high capacity transit alternative to address not only existing, but projected growth and demand within the Eastside Phase 2 Transit Corridor. This report describes the purpose and need for the project in greater detail below.

1.3 Project Area Location and Demographics

The Eastside Transit Corridor Phase 2 project area is generally bounded by California Interstate 10 (I-10) to the north, Peck Road and Painter Avenue to the east, Olympic and Washington Boulevards to the south, and the Gold Line Eastside Extension to the west. The project area consists of portions of eight jurisdictions, including the cities of Commerce, Montebello, Monterey Park, Pico Rivera, Rosemead, Santa Fe Springs, South El Monte, Whittier, and portions of unincorporated Los Angeles County, which include East Los Angeles and west Whittier-Los Nietos. The project area is illustrated in Figure 1-1.

According to projections from the Southern California Association of Governments (SCAG), the project area had reached a population of 720,850 in 2010, comprising approximately 7 percent of the Los Angeles County population. The current project area population surpasses that of other notable cities with mature transit networks, such as Boston (645,169)² and Washington to D.C. (599,657), as reported by the U.S. Census Bureau's 2009 Top Cities Index. By the year 2035, the project area population is expected to increase by an additional 12 percent to 807,567.

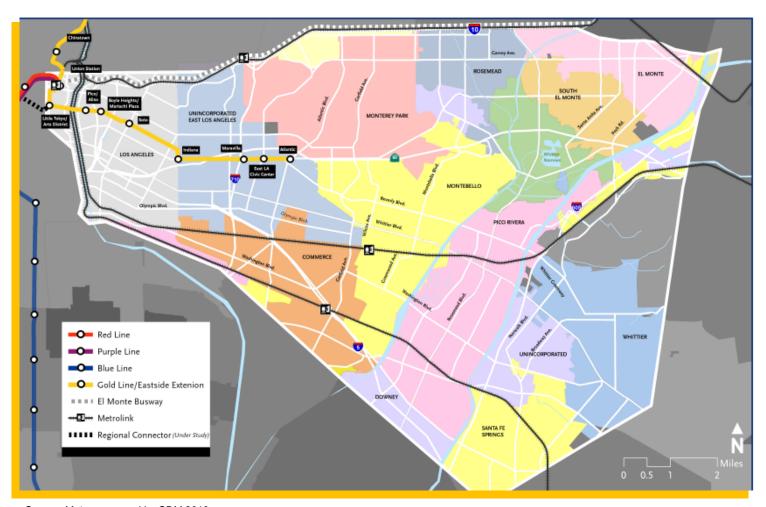
The project area demographic and transit dependency factors are summarized below:

- Low-income households comprise 19 percent of the total households, which is higher than the county average of 17 percent.
- 42 percent of the population is age 18 and younger, or age 65 and older.
- Approximately 16 percent of households in the project area had zero-vehicles in 2000: higher than the county average, with some of the highest concentrations in the western and central portions of the project area.

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² Eastside Phase 2 Transit Corridor project has a population larger than the cities of Boston and Washington D.C.. The comparison for these two cities is based on total population. It is not intended to be a comparison of population densities (population per square mile). The Eastside Phase 2 project is also larger than both cities in terms of square miles. The Eastside Phase 2 area is 82 square miles compared to the size of Boston (48 sq miles) and Washington D.C. (61 sq miles). Information is based on the most recent data available, the 2009 Census Top Cities Index, which provides annual estimates of the resident population for incorporated places over 100,000, July 2009. The Land area is based on the US Census Bureau State and County QuickFacts, 2000.





Source: Metro; prepared by CDM 2010

Figure 1-1. Project Area



1.4 The Mobility Problem

The Southern California region is faced with increasing mobility challenges due in large part to population growth. The Eastside Transit Corridor Phase 2 project area is particularly affected by this problem in the region.

Currently, many residents within the Eastside Transit Corridor encounter long travel delays from the project areas to regional centers in downtown Los Angeles and beyond. If unaddressed, these mobility challenges pose a risk to future population and economic growth, commuter safety, existing infrastructure, goods movement, air quality, and environmental considerations. If no action is taken, transportation challenges within the project area will continue to grow:

Increased travel demand – The number of work trips taken to and from the project area in 2006 is forecast to increase 32 percent by 2035. A major destination for trips from the project area to outside the project area is Central Los Angeles, including the Central Business District (CBD) with over 50,000 trips a day. Many Eastside Transit Corridor residents already encounter traffic congestion delays for travel both within the project area and beyond. Increased travel demand will pose a greater problem if nothing is done either to curb demand or provide alternative mobility options to accommodate growth.

- Increasing travel times With average travel speed decreasing from 2006 to 2035 by 18 percent in the morning peak hour and 24 percent in the afternoon peak, automobile and buses sharing the freeway and arterial network will incur more delays. By 2035, the average peak-hour travel time within the project area is expected to increase by 25 percent and 34 percent in the morning and afternoon peak hours, respectively.
- Continuing transit-dependent population The project area has a significant level of transit-dependent residents who need convenient and reliable transit options to get them where they want and need to go; 42 percent of the project area population is under age 18 or over age 65, 19 percent of households are categorized as low-income, and 16 percent of all households have zero-vehicles. In addition, the Metro Model suggests that corridor transit demand is estimated to increase by approximately 19 percent overall by 2035³.
- Increasing freeway congestion With no major freeway improvements planned, a growing population, and forecast increases in travel demand, freeway congestion will continue to increase. According to the 2010 Draft Los Angeles County Congestion Management Program (CMP)⁴, 50 percent of the freeway system currently operates under heavily congested conditions during morning and afternoon peak periods. Projections from the Metro Model for year 2035 show the same congested travel patterns continuing and increasing, with nearly 19 percent growth in travel demand through year 2035.

³ Los Angeles County Regional Travel Demand Model (Metro Model).

⁴ The 2010 Draft Congestion Management Program (CMP) was released for public comment on August 18, 2010 and is scheduled for adoption by the Los Angeles County Metropolitan Transportation Authority (Metro) Board of Directors in October, 2010. Information is available online at: www.metro.net/projects/congestions.mgmt.pgm/projects/programs.cmp/



- Increasing arterial congestion Los Angeles has the distinction of being the most congested urban area in the country, according to the most recent annual survey of traffic congestion levels conducted by the Texas Transportation Institute (*Urban Mobility Report 2009*, National Congestion Tables). Major arterials in the project area, like the freeways, experience heavy morning and evening peak period congestion, which negatively affects access for both automobiles and buses. As reported in the 2010 Draft CMP, nearly 25 percent of the arterial intersections in the project area operate at unacceptable conditions during the morning peak period, and approximately 50 percent operate at unacceptable conditions in the afternoon peak. Peak period congestion also affects local streets as drivers detour to avoid travel delays, negatively impacting the local circulation to and from neighborhoods within the project area.
- Heavy truck traffic The State Route 60 (SR 60), Interstate 5 (I-5), and Interstate 10 (I-10) freeways, along with project area arterial streets, such as Washington Boulevard, are subject to heavy truck traffic. This is due to goods movement traffic associated with the ports of Los Angles and Long Beach, and manufacturing activity in the vicinity of the project area. Automobiles and buses often have to compete with truck traffic in and around the project area, which, when combined with congestion and increased travel demand, further compounds the mobility issues in the project area.
- Increased population and employment growth An increasing number of trips within, to, and from the project area will continue to strain the presently available transportation network. Population densities, employment densities, and the concentration of activity centers in the project area are expected to increase, further contributing to this issue. As noted earlier, population is projected to increase by 12 percent by 2035, while jobs within the project area will increase by seven percent. These factors are important to consider when identifying mobility options that respond to increased growth within the project area.
- Limited travel options With limited regional rail system connections, residents of, and visitors to, the project area can rely only on available bus systems operating on the same congested roadway network. Commuter rail options are limited to two Metrolink stations within the 82-square-mile project area.

Multiple factors contribute to the mobility problems facing the Eastside Phase 2 transit project area. In analyzing these mobility issues, a number of themes have emerged that articulate the need for a transit improvement in the Eastside Phase 2 Transit Corridor. These themes, discussed in more detail in subsequent sections, demonstrate how a high capacity transit alternative would serve to address the following:

Page 6

⁵ This survey compares traffic congestion levels in the 75 largest urban regions in the U.S. Los Angeles ranks first in all three categories of congestion measurement: Annual Person Hours of Delay, Annual Delay per Peak Road Traveler, and Annual Delay per Person.



- Alleviate **peak-hour congestion on the roadway network** by providing transit alternatives to meet increased demand;
- Provide additional travel options, given the project area's high travel demand, and connectivity constraints;
- Effectively get people to the **concentration of activity centers** that exists within, and adjacent to, the project area;
- Address the demand for transit service, and meet the needs of transitdependent populations;
- Accommodate areas of increased population and employment growth;
- Encourage transit-supportive land use and economic development opportunities; and
- Increase **environmental benefits** to meet air quality and state mandates.



2.0 HISTORY AND BACKGROUND

Studies of major rail transit infrastructure investments on the Eastside date back to the 1980s, and loose plans for a major east-west route through Los Angeles County exist from prior decades.

Eastside Transit Corridor Studies: Re-Evaluation Major Investment Study

Metro initially selected an extension of the Metro Red Line heavy-rail subway as the locally preferred alternative for the Eastside Corridor, but this project was suspended in 1998 due to funding shortfalls and a voter-approved ban on Proposition A sales tax revenue being used for subway construction. Metro later adopted an extension of the Pasadena Blue Line light rail project (later named the Metro Gold Line) as the new locally preferred alternative for the Eastside following the 2000 *Eastside Transit Corridor Studies: Re-Evaluation Major Investment Study.*

Eastside Corridor Environmental Impact Statement/Environmental Impact Report

In 2001, Metro completed the Draft Supplemental Environmental Impact Statement/Draft Subsequent Environmental Impact Report (Draft Supplemental EIS/Subsequent EIR), and subsequently a Final Supplemental EIS/Subsequent EIR in 2002, for the first phase of what is now known as the Metro Gold Line Eastside Extension. As part of the Federal New Starts Program funding application, Metro received a Record of Decision from the Federal Transit Administration (FTA) and ultimately a Full Funding Grant Agreement, which committed the federal government to approximately half of the project's cost. As a result of this effort, the Metro Gold Line Eastside Extension's first phase was completed in November 2009.

Eastside Transit Corridor Phase 2 Alternative Analysis

In 2007, Metro initiated plans for a high capacity transit connection to the Eastside Extension Phase 1 project by conducting an *Eastside Transit Corridor Phase 2 Alternatives Analysis Report (2009)*. During the alternatives analysis study process, 47 initial alternatives were evaluated and screened down to four feasible build alternatives. In order to further refine the build alternatives for environmental analysis, Metro conducted the *Eastside Transit Corridor Phase 2 Alternatives Analysis Addendum* (2009) with applied additional evaluation criteria and conceptual level engineering. In October 2009 the Metro Board of Directors approved the advancement of two LRT build alternatives along with the No Build and Transportation Systems Management (TSM) alternatives into the EIS/EIR process for the Eastside Transit Corridor Phase 2 Project.

Metro Long Range Transportation Plan

The Eastside Transit Corridor Phase 2 Project is identified in Metro's Long Range Transportation Plan (2009) and has been selected as one of many transit and highway projects to receive local Measure R funding.

SCAG 2008 Regional Transportation Plan (RTP)

The Eastside Transit Corridor Phase 2 Project was recently included in the *SCAG 2008 Regional Transportation Plan- Making the Connections Amendment #3*, adopted in April, 2010. The RTP also outlines several projects in and around the project area aimed at maximizing the effectiveness, safety,



and reliability of Southern California's transportation system. These projects include widening I-5 and adding one high-occupancy vehicle (HOV) lane in each direction, and constructing a truck route along Interstate 710 (I-710) and SR 60 to facilitate goods movement to San Bernardino County from the Ports of Los Angeles and Long Beach. However, as there are no plans to widen I-5 to the west approaching downtown Los Angeles, this improvement will not improve access to principal destinations for travel generated within the Eastside Transit Corridor Phase 2 project area. Similarly, regional improvements to accommodate north-south goods movement will not materially improve conditions for commute and other home-based trips generated to or from destinations within the project area.



3.0 TRANSPORTATION FACILITIES AND SERVICES

3.1 The Regional Transit Context

3.1.1 Metro Rail

Metro operates fixed guideway rail service throughout the Los Angeles metropolitan area. It provides over 79 miles of urban rail served by the Metro Red and Purple Line heavy rail subways, and the Blue, Green, and Gold light rail lines. The majority of Metro rail stations provide connections to additional public transportation options, including Metrolink commuter rail, Amtrak intercity rail, bus rapid transit, and bus service provided by both Metro and various cities. Figure 3-1 provides a map of currently available Metro rail and transitway service in the region. The lines include:

Metro Red Line – This line originates from Union Station with several stops in downtown Los Angeles, and stops at Vermont/Santa Monica (near Los Angeles Community College), the tourist hub of Hollywood and Highland, and the Universal theme park location in Universal City. The line began operating with service between Union Station and Wilshire/Vermont in 1993. The current 17.4-mile line branches in two directions at the Wilshire/Vermont Station. The Mid-Wilshire/Western branch opened in 1996 and is referred to as the Purple Line. The Hollywood branch has operated since 1999, with service to North Hollywood beginning in 2000. As of the 2009 fiscal year, the Red Line carried approximately 152,000 weekday boardings.

Metro Blue Line – Opened in 1990, this line was the first LRT system for Los Angeles since the previous system's closure in the 1960s. The 22-mile line runs between 7th Street/Metro Center in downtown Los Angeles and Long Beach, passing through the communities of Vernon, Huntington Park, South Gate, Watts, Compton, and Carson. The Blue Line, which has more stations than any other Metro rail line, averaged 77,966 weekday boardings in the 2009 fiscal year.

Metro Green Line – Opened in 1995, this line serves the communities of Norwalk, Downey, Lynwood, Watts, Inglewood, Lennox, El Segundo, Manhattan Beach, and Redondo Beach. It is approximately 20 miles long and runs east-west, primarily along the median of the Interstate 105 Freeway (I-105). Metro is conducting an environmental review examining options for extending the Green Line into the South Bay area. In the 2009 fiscal year, the line had an average of 38,985 weekday boardings.

Metro Gold Line – Opened in 2003, the Gold Line was originally part of the Blue Line Extension, but was halted due to a lack of funding and other complications. The 13.6-mile line serves the communities of Chinatown, Highland Park, South Pasadena, and Pasadena. The Gold Line Eastside Extension opened in 2009 with eight new stations serving communities such as the Arts District, Little Tokyo, Boyle Heights, and East Los Angeles. The 6-mile line now connects with the existing Gold Line to Pasadena without requiring riders to transfer. As of the 2009 fiscal year, the line averaged 32,315 weekday boardings.



Metro Expo Line – Currently under construction, Phase 1 of the Exposition Line to Culver City is an 8.5-mile line to run primarily at-grade from 7th Street/Metro Center in downtown Los Angeles to the intersection of Washington Boulevard and National Boulevard in Culver City.

Metro Orange Line – The Metro Orange Line is a 14-mile dedicated busway and bike path that opened in 2005. It runs east and west from North Hollywood, interfacing with the Metro Red Line, to the Warner Center. It serves as a shortcut through the San Fernando Valley, boarding an average of 23,521 weekday riders in fiscal year 2009. Scheduled to open in 2012, the Orange Line Extension will extend four miles north from the Canoga Station to the Chatsworth Metrolink Station. This dedicated busway will offer four new stations at Sherman Way, Roscoe Boulevard, Nordoff Street, and the Chatsworth Metrolink Station.

3.2 Transportation Facilities and Services within Project Area

3.2.1 Bus

Bus service is the primary public transportation option available to the communities within the project area. In addition to Metro, six local bus operators provide service to the project area, including local, express, and paratransit.

Major travel corridors in the project area include east-west corridors such as Whittier Boulevard, Beverly Boulevard, Olympic Boulevard and Washington Boulevard, and north-south corridors such as Atlantic Boulevard, Garfield Avenue, Rosemead Boulevard, and Montebello Boulevard. Fixed route service in the project area runs at high frequencies during typical working hours, with decreased service during the evenings and weekends. Rail feeder routes provide direct connections to Metrolink and Amtrak rail stations, providing transportation to most major shopping areas, recreation facilities, and public schools within the project area. Figure 3-2 illustrates transportation facilities in the area. Table 3-1 shows the bus lines provided by each bus operator and the frequency of available service for each bus route.

Bus service in the project area is operated by seven transportation providers, including:

- Metro Bus;
- Montebello Bus Lines;
- Monterey Park Spirit Bus Lines;
- Commerce Municipal Bus Lines;
- Norwalk Transit;
- Whittier Transit; and
- Foothill Transit.

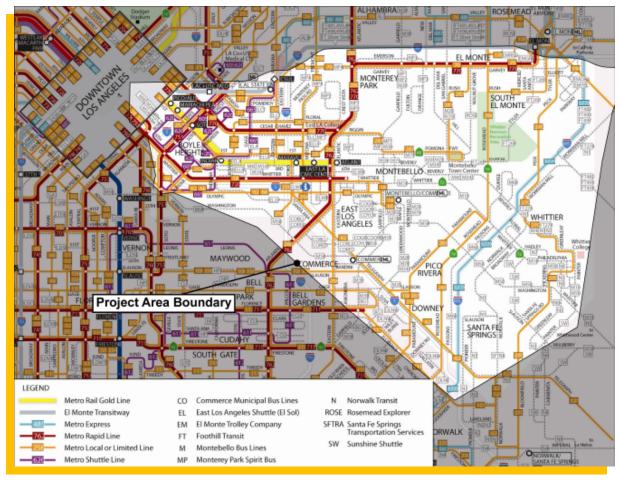




Source: Metro, prepared by CDM/AECOM 2010

Figure 3-1. Regional System Map





Source: Metro 2010. Graphic prepared by CDM/AECOM Joint Venture, 2010.

Figure 3-2. Transportation Services in the Project Area



Table 3-1. Transit Service Providers in Project Area

		Operating Route		Frequency (Weekday)			
Transit Line	From/To	To/From	Via	AM (min)	Mid-Day (min)	PM (min)	
Metro Lines t	o/from Downtown Los Aı	ngeles					
18	Koreatown	Montebello	Whittier Blvd.	6	6-12	5	
30	Little Tokyo	Monterey Park	1st Street	4-10	8-15	6-15	
62	Hawaiian Gardens	Boyle Heights	Telegraph Blvd.	15-20	30-40	60	
66	Wilshire/Western	Montebello	Olympic Blvd.	10-15	14	12-15	
68	Mariachi Plaza	Atlantic Blvd./Pomona Blvd.	Cesar Chavez Avenue	20-30	12-15	20-30	
70	USC Medical Center	El Monte Garvey Avenue		15	15	12	
Metro East-W	Metro East-West Lines						
108	Marina Del Rey	Pico Rivera	Slauson Avenue	8-10	30	8-15	
176	El Monte	Highland Park	Mission Drive and Garfield Avenue	20-30	60	35	
Metro North-S	South Lines						
251	Cypress Park	Lynwood	Soto Street	20	20	20	
256	Commerce	Alta Dena	Eastern Avenue	30-45	45	45	
258	Alhambra	Paramount	Fremont Avenue and Eastern Avenue	40-45	45	40	
260	Alta Dena	Artesia Blue Line Station	Fair Oaks Avenue and Atlantic Avenue	12-30	20	15	
265	Pico Rivera	Lakewood Center Mall	Paramount Blvd.	30-35	60	30	



Table 3-1. Transit Service Providers in Project Area (continued)

Transit		Operating Route	Frequency (Weekday)			
Line	From/To	To/From	Via	AM (min)	Mid-Day (min)	PM (min)
Metro Expres	ss Routes to/from Downto	own Los Angeles				
485	Alta Dena	Downtown Los Angeles	El Monte Busway	30	30	20
487/ 489	El Monte	Macarthur Park	Santa Anita Avenue, Rosemead Blvd. and San Gabriel Avenue	20	30-40	30
Metro Shuttle	e and Circulator					
611	Florence	Cudahy	Wilcox Avenue and Atlantic Avenue	10-40	40	40
620	Whittier/ Soto	Boyle Heights	Cesar Chavez Avenue		20	20
Metro Rapid						
720	Santa Monica	Commerce	Whittier Blvd.	12	N/A	20
751	Cypress Park	Huntington Park	Soto Street	20	16-17	11-12
770	Los Angeles	El Monte	Cesar Chavez Avenue and Garvey Avenue	20	12-13	12-13
Montebello B	Bus Lines					
10	Monterey Park	Pico Rivera and Whittier	Atlantic Blvd. and Whittier Blvd.	6-15	20-30	6-15
20	Commerce	Rosemead and San Gabriel	Montebello Blvd. and San Gabriel Blvd.	15	20-30	15
30	South Gate	Alhambra	Garfield Avenue	45	55	45
40	Downtown Los Angeles	Whittier	Beverly Blvd.	9-12	15-20	9-12



Table 3-1. Transit Service Providers in Project Area (continued)

Transit		Operating Route				
Transit Line	From/To	To/From	Via	AM (min)	Mid-Day (min)	PM (min)
50	Downtown Los Angeles	La Mirada	Washington Blvd.	30-35	50-55	30-35
60	Santa Fe Springs	Montebello	Passons Avenue	35	70	35
70	Commerce	Montebello Town Center	Via Camp and Wilcox Avenue	30	30	30
341	Taylor Ranch	Downtown Los Angeles	Beverly Blvd.	20-25	60	55
342	Norwalk Blvd. Downtown Los Angeles		Beverly Blvd.	1 trip	N/A	2 trips
Monterey Park Spirit Bus Lines						
1	Local Circulator Service		Atlantic Avenue	40	40	40
2	Local Circulator Servic	e	Garfield Avenue	40	40	40
3	Local Circulator Servic	e	Garvey Avenue	40	40	40
4	Local Circulator Servic	e	Riggins Street	40	40	40
5	Local Circulator Servic	e	Floral Drive	40	40	40
Commerce M	lunicipal Bus Lines					
Blue	City Circulator Service		-	60	60	60
Red	City Circulator Service		-	53	60	60
Green	City Circulator Service		-	60	60	60
Orange	City Circulator Service		-	60	60	60
Yellow	City Circulator Service		-	60	60	60



Table 3-1. Transit Service Providers in Project Area (continued)

Transit		Operating Route	Frequency (Weekday)			
Line	From/To	To/From	Via	AM (min)	Mid-Day (min)	PM (min)
Norwalk Tran	Norwalk Transit Lines					
1	Bellflower	Rio Hondo College	Santa Fe Springs and Pioneer Blvd.	45	45	45
7	Whittwood Town Center	Northwest Whittier	Northwest Whittier Whittier Blvd., Norwalk Blvd. and Beverly Blvd.		45	45
Whittier Tran	sit Lines					
7	Whittwood Town Center	Northwest/ Uptown Whittier	Whittier Blvd., Norwalk Blvd. and Beverly Blvd.	45	45	45
Foothill Trans						
269	El Monte Station	Montebello Town Center	Santa Anita Avenue and Dufree Avenue	30	30	30
274	West Covina	Industry/Whittier	Puente Avenue and Workman Mill Road	60	60	60
285	Puente Hills Mall	La Habra/ Whittier Hospital	Colima Road and Whittier Blvd.	60	60	60
481	El Monte Station	Downtown Los Angeles	I-10 Freeway	20	20	20
497	Chino Transit Center	Downtown Los Angeles	SR 60 and I-10 Freeways	12-20	12-20	12-20

Sources:

- 1. Los Angeles County Metropolitan Transportation Authority (Metro)
- City of Montebello
 City of Monterey Park
- City of Commerce
 City of Norwalk
 City of Whittier

- 7. Foothill Transit



3.2.2 Commuter Rail

Commuter and intercity rail service within the project area are provided by Metrolink and Amtrak, with a connection to Metro rail service at Union Station (see Figure 3-1).

Metrolink operates under the Southern California Regional Rail Authority (SCRRA), serving the counties of Ventura, Los Angeles, Riverside, San Bernardino, Orange, and San Diego on 512 route miles.

Within the project area there are two Metrolink stations. The Commerce Station, at the intersection of Garfield Avenue and Telegraph Road, provides service south of Union Station via the Orange County Line. Secondly, the Riverside Line stops at the Montebello/Commerce Station, situated near the intersection of Garfield Avenue and Flotilla. Stops adjacent to the project area include the Cal State Los Angeles Station on the San Bernardino line, adjacent to I-10, and the El Monte Station north of the project area boundary. As of April 2010, the entire Metrolink system averaged 40,174 weekday boardings.

Amtrak offers statewide and nationwide service as well as an intercity passenger rail system within Southern California. Amtrak is accessible west of the project area at the Los Angeles Union Station. Amtrak's Pacific Surfliner line carries passengers from San Luis Obispo in the north to San Diego in the south.

3.3 Transportation System Performance

Regional transportation planning for Southern California's six-county area is the responsibility of SCAG, which is the Metropolitan Planning Organization (MPO) for the area. In May 2008, the SCAG Regional Council adopted the RTP, entitled "Making the Connections," to establish the goals, objectives, and policies for the transportation system, as well as to establish the implementation plan for transportation investments over the next 27 years.

The RTP includes regional performance indicators with objectives that transportation investments can be measured against. The performance indicators, based on the 2003 base year scenario, illustrate that travel conditions in the project area will worsen by 2035 and the area will not meet regional objectives for mobility, accessibility, reliability, or safety without the implementation of additional transportation improvements. This conclusion is supported by the data provided below describing the performance of the roadway and transit systems serving the project area.

3.3.1 Traffic Volumes and Operating Conditions

Los Angeles has the distinction of being the most congested urban area in the country, according to the most recent annual survey of traffic congestion levels conducted by the Texas Transportation Institute (*Urban Mobility Report 2009*, National Congestion Tables). The Eastside Transit Corridor Phase 2 project area contains some of the most congested traffic conditions in Los Angeles, with

⁶ This survey compares traffic congestion levels in the 75 largest urban regions in the U.S. Los Angeles ranks first in all three categories of congestion measurement: Annual Person Hours of Delay, Annual Delay per Peak Road Traveler, and Annual Delay per Person.



limited east-west connectivity through East Los Angeles. Congestion is often characterized by slower speeds, longer trip times, and increased vehicular queuing.

Traffic congestion and commute times are forecast to increase in the county and project area. Over the ten-year period from 1990 to 2000, residents of Los Angeles County experienced an 11 percent increase in travel time to and from work. Based on SCAG projections, travel times to and from work will experience an increase of 15 percent by 2035. The average travel speed will decrease from 27.4 miles per hour (mph) to 25.0 mph, representing the lowest average travel speed in the SCAG region. The following sections describe the conditions on freeways and arterial streets within the project area.

3.3.1.1 Freeways

The I-10, SR 60, Interstate 605 (I-605), I-5, and Interstate 710 (I-710) freeways experience high levels of vehicular demand greater than capacity, creating congestion, particularly during peak commute periods. The heaviest congestion occurs on the I-5, SR 60, and I-10 freeways (the only east-west freeways in the project area) westbound to the Los Angeles CBD in the morning peak period and in the eastbound direction during the afternoon peak. In the PM peak, congestion is also present to a lesser degree in the reverse direction. As shown in Table 3-2, Caltrans 2008 Annual Average Daily Traffic (AADT) approximates 214,000 vehicles travelling in either direction on SR 60, over 220,000 on I-10, and over 232,000 on I-5 within the project area.

The north/south I-710 and I-605 freeways are congested in both peak periods. Additionally, the I-605 and I-710 freeways experience heavy truck traffic due to goods movement throughout the day. Caltrans 2008 AADT shows that I-710 carries over 181,000 vehicles and I-605 carries over 241,000 vehicles daily within the project area.

According to the 2010 Draft CMP, 50 percent of the freeway system operated under heavily congested conditions during morning and afternoon peak periods.

Preliminary projections from the Metro Model for year 2035 forecast the same congested travel patterns to continue and increase, with a nearly 19 percent growth in travel demand over existing conditions. With no major freeway improvements identified in the financially constrained 2008 Regional Transportation Plan, building transit network coverage and services will be crucial to addressing the projected growth in population and employment. In general, as discussed in the 2009 Eastside Transit Corridor Phase 2 Alternatives Analysis Report, the anticipated growth along the freeway segments and on major arterials in the project area will worsen operating conditions and result in increased congestion and delays. Table 3-2 shows the future traffic volume projections on the freeways within the project area.



Table 3-2. Existing and Projected Average Daily Traffic Volumes for Freeways in the Project Area

Freeway Name	Limits	2008 Average Daily Traffic	Projected 2035 Average Daily Traffic
SR 60	I-605 to I-5	214,000	231,000
I-10	I-605 to I-5	220,000	292,000
I-5	I-605 to I-10	232,000	291,000
I-710	I-10 to I-5	181,000	193,000
I-605	I-10 to I-5	241,000	299,000

Source: Metro Model. Traffic volumes represent the average flows on several freeway links between the limits stated. The links used are only those between intersections; links within intersections (such as between freeway ramps) were not included.

3.3.1.2 Arterials

Major arterials in the project area that provide access to the freeways include Pomona Boulevard, Beverly Boulevard, Whittier Boulevard, Olympic Boulevard, Via Campo, and Washington Boulevard in the east-west direction. In the north-south direction, Atlantic Boulevard, San Gabriel Boulevard, Paramount Boulevard, Rosemead Boulevard, Santa Anita Avenue, Montebello Boulevard, Garfield Avenue, Pioneer Boulevard, Wilcox Avenue, and Norwalk Boulevard provide access. Many of these roadways also serve as local and regional commercial corridors.

Major arterials in the project area, like the freeways, experience heavy morning and evening peak period congestion that negatively impacts access to local destinations. As reported in the 2010 Draft Los Angeles County CMP, nearly 25 percent of the arterial intersections in the project area operate at unacceptable conditions during the morning peak period, and approximately 50 percent in the afternoon peak period. Peak period congestion also impacts local streets, as drivers detour to avoid travel delays, negatively impacting the project area's neighborhoods. Table 3-3 shows the existing average daily traffic on primary arterials in the project area.

Future 2035 arterial ADT volumes from the Metro Model show an average traffic volume increase of 20 percent for the primary arterials in the project area, compared to existing conditions.

Table 3-4 shows the No Build Alternative scenario peak period travel times and average speeds for vehicles traveling in multiple directions in the vicinity of the proposed build alternatives. Overall, the travel time for vehicles in major segments of the alignments would increase by 25 percent in the AM peak and 34 percent in the PM peak. The average speed during the AM and PM peak periods would decrease by 18 and 24 percent, respectively.



Table 3-3. Existing Average Daily Traffic Volumes for Primary Arterials in the Project Area

Street Name	Count Location	Total Daily Volume		
North-South Arterials				
Atlantic Boulevard	South of Beverly Boulevard	33,770		
Wilcox Avenue	South of Via Campo	26,202		
San Gabriel Boulevard	South of SR 60 Freeway	16,749		
Paramount Boulevard	South of SR 60 Freeway	31,074		
Rosemead Boulevard	South of San Gabriel Boulevard	41,083		
Garfield Avenue	South of Olympic Boulevard	31,168		
Montebello Boulevard	West of Paramount Boulevard	43,466		
Santa Anita Avenue	North of Durfee Avenue	6,122		
Pioneer Boulevard	South of Washington Boulevard	22,276		
Norwalk Boulevard	South of Washington Boulevard	26,163		
East-West Arterials				
Pomona Boulevard	East of Wilcox Avenue	21,013		
Via Campo	West of Wilcox Avenue	26,890		
Beverly Boulevard	West of Garfield Avenue	21,696		
Whittier Boulevard	East of Garfield Avenue	26,909		
Olympic Boulevard	West of Garfield Avenue	21,979		
Washington Boulevard	West of Pioneer Boulevard	46,202		

Source: Los Angeles County Department of Public Works (LACDPW) Machine Count Traffic Volumes and city of Montebello General Plan. Count data collected from 2007 to 2009.



Table 3-4. Peak Period Travel Times and Average Vehicle Speed 2006 and 2035 (No Build Alternative)

		Year 2006				2035 Forecast			
Section	Direction	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)
Pomona Blvd. between Atlantic Blvd. and Garfield Avenue	Eastbound (EB)	1.6	41	3.4	19	2.4	28	4.8	14
Garfield Avenue between Via Campo and Beverly Blvd.	Southbound (SB)	2.4	11	2.6	11	3.3	8	3.5	8
Garfield Avenue between Beverly Blvd. and Whittier Blvd.	SB	1.8	17	1.9	17	3.0	11	2.7	12
Garfield Avenue between Whittier Blvd. and Olympic Blvd.	SB	1.1	12	0.7	20	1.3	10	0.7	20
Garfield Avenue between Olympic Blvd. and Washington Blvd.	SB	2.3	20	2.1	22	2.8	16	2.9	16
Washington Blvd. between Garfield Avenue and Greenwood Avenue	EB	1.6	32	2.9	17	1.9	26	3.8	13
Washington Blvd. between Greenwood Avenue and Paramount Blvd.	EB	1.9	31	3.7	16	2.7	22	5.0	12
Washington Blvd. between Paramount Blvd. and Rosemead Blvd.	EB	1.0	33	1.7	20	1.6	22	2.7	13
Washington Blvd. between Rosemead Blvd. and Passons Blvd.	EB	0.9	32	1.4	19	1.4	20	2.2	13
Washington Blvd. between Passons Blvd. and Pioneer Blvd.	EB	1.8	29	2.9	18	3.2	17	4.1	13



Table 3-4. Peak Period Travel Times and Average Vehicle Speed 2006 and 2035 (No Build Alternative) (continued)

		Year 2006				2035 Forecast				
Section	Direction	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)	
Washington Blvd. between Pioneer Blvd. and Norwalk Blvd.	EB	0.4	33	0.4	29	0.4	30	0.5	26	
Washington Blvd. between Norwalk Blvd. and Broadway	EB	0.6	32	0.9	21	0.8	23	0.9	19	
Washington Blvd. between Broadway and Lambert Road	EB	2.2	33	3.3	22	2.9	25	3.9	19	
Washington Blvd. between Lambert Road and Whittier Blvd.	EB	0.7	35	0.8	30	0.7	35	0.8	30	
Washington Blvd. between Lambert Road and Whittier Blvd.	Westbound (WB)	0.7	31	0.7	34	0.7	32	0.7	33	
Washington Blvd. between Broadway and Lambert Road	WB	3.0	24	2.6	28	3.1	24	3.5	21	
Washington Blvd. between Norwalk Blvd. and Broadway	WB	0.7	24	0.7	27	0.7	24	0.9	19	
Washington Blvd. between Pioneer Blvd. and Norwalk Blvd.	WB	0.4	30	0.4	31	0.4	28	0.5	26	
Washington Blvd. between Passons and Pioneer Blvd.	WB	2.8	19	2.2	24	3.1	17	3.5	15	
Washington Blvd. between Rosemead Blvd. and Passons Blvd.	WB	1.2	23	0.9	30	1.3	21	1.4	20	
Washington Blvd. between Paramount Blvd. and Rosemead Blvd.	WB	1.6	21	1.2	29	1.9	18	1.7	20	



Table 3-4. Peak Period Travel Times and Average Vehicle Speed 2006 and 2035 (No Build Alternative) (continued)

		Year 2006				2035 Forecast			
Section	Direction	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)	AM Time (mins)	AM Speed (mph)	PM Time (mins)	PM Speed (mph)
Washington Blvd. between Greenwood Avenue and Paramount Blvd.	WB	3.4	17	2.4	25	3.7	16	3.1	19
Washington Blvd. between Garfield Avenue and Greenwood Avenue	WB	3.0	17	2.0	26	3.0	17	2.7	19
Garfield Avenue between Olympic Blvd. and Washington Blvd.	Northbound (NB)	1.8	26	2.7	17	2.3	20	3.7	13
Garfield Avenue between Whittier Blvd. and Olympic Blvd.	NB	0.5	26	1.2	11	0.6	22	1.3	10
Garfield Avenue between Beverly Blvd. and Whittier Blvd.	NB	1.4	22	1.9	16	1.8	17	3.3	10
Garfield Avenue between Via Campo and Beverly Blvd.	NB	1.2	22	1.6	17	1.6	17	2.5	11
Pomona Blvd. between Atlantic Blvd. and Garfield Blvd.	WB	4.0	20	3.3	24	5.1	16	5.0	16

Source: Metro Model 2006, 2035



3.3.2 Transit System and Operating Conditions

As described earlier, the project area is served by many bus routes operated by Metro, Montebello Bus Lines, Norwalk Transit, Foothill Transit, as well as by more limited bus service and shuttles provided by the cities of Monterey Park, Commerce, and Whittier. Ridership demand on existing bus lines in the project area is relatively high. Table 3-5 shows the daily ridership for some of the key north-south and east-west bus lines within the project area. Additionally, Figure 3-3 graphically illustrates bus lines with the highest daily ridership.

Recent fiscal year 2010 figures show daily boardings for the east-west bus lines ranging from 1,600 to over 36,000. The bus lines with the highest ridership include the Metro 720, providing limited stop service from Santa Monica to Commerce via Whittier Boulevard (36,147), Metro 18 local service from Koreatown to Montebello via Whittier Boulevard (26,198), and Metro 66 local service from Wilshire/Western to Montebello via Olympic Boulevard (23,114). The relatively high ridership on project area transit lines reinforces the need for east/west connections from the project area to major employment and activity centers in Central Los Angeles and farther west.

Table 3-5. Existing Weekday Bus Ridership for Key Bus Lines in Project Area

Transit		Operating Route		Average
Line	From/To	From/To	Via	Daily Ridership*
18	Koreatown	Montebello	Whittier Blvd.	26,198
30	Little Tokyo	Monterey Park	First Street	14,235
62	Hawaiian Gardens	Boyle Heights	Telegraph Blvd.	4,324
66	Wilshire/Western	Montebello	Olympic Blvd.	23,114
70	USC Medical Center	El Monte	Garvey Avenue	11,799
108	Marina Del Rey	Pico Rivera	Slauson Avenue	16,720
176	El Monte	Highland Park	Mission Drive and Garfield Avenue	1,086
251	Cypress Park	Lynwood	Soto Street	9,130
258	Alhambra	Paramount	Fremont Avenue and Eastern Avenue	1,629
260	Alta Dena	Artesia Station	Fair Oaks Avenue and Atlantic Avenue	12,033
265	Pico Rivera	Lakewood Center Mall	Paramount Blvd.	1,803



Table 3-5. Existing Weekday Bus Ridership for Key Bus Lines in Project Area (continued)

Transit		Operating Route		Average Daily
Line	From/To	From/To	Via	Ridership*
485	Alta Dena	Downtown Los Angeles	El Monte Busway	2,888
487/489	El Monte	Macarthur Park	Santa Anita Avenue, Rosemead Blvd. and San Gabriel Avenue	3,930
611	Florence	Cudahy	Wilcox Avenue and Atlantic Avenue	2,322
720	Santa Monica	Commerce	Whittier Blvd.	36,147
751	Cypress Park	Huntington Park	Soto Street	6,339
Montebello	Bus Lines			
M10	Monterey Park	Pico Rivera and Whittier	Atlantic Blvd. and Whittier Blvd.	9,276
M20	Commerce	Rosemead and San Gabriel	Montebello Blvd. and San Gabriel Blvd.	3,648
M30	South Gate	Alhambra	Garfield Avenue	1,696
M40	Downtown Los Angeles	Whittier	Beverly Blvd.	8,109
M50	Downtown Los Angeles	La Mirada	Washington Blvd.	4,312
Norwalk Tr	ansit			
NWK1	Bellflower	Rio Hondo College	Santa Fe Springs and Pioneer Blvd.	2,440

^{*}Average daily ridership (boardings) obtained from each jurisdiction represent numbers from fiscal year 2009-2010.

Note: Prefix of "M" indicates a Montebello Bus Line; prefix of "NWK" indicates a Norwalk Transit bus line; Metro bus lines are indicated in plain numbers





Source: Metro and Bus providers in the project area, 2010; prepared by CDM/AECOM Joint Venture, 2010. Note: Prefix of "M" indicates a Montebello Bus Line; prefix of "NW" indicates a Norwalk Transit bus line; Metro bus lines are indicated in plain numbers.

Figure 3-3. Existing Weekday Bus Ridership, Selected Lines in Project Area



3.3.2.1 Transit System Speeds and Travel Times

The major factors influencing bus operating conditions are the traffic conditions during operating periods, passenger loading time, and bus stop spacing. The project area has substantial traffic congestion (especially east-west), high ridership and load factors, and closely spaced bus stops.

Average bus operating speeds within the project area are forecast to decrease from 15 mph in 2006 to 12 mph in 2035. Average round trip travel times for bus routes operating through the project area are forecast to increase from 132 minutes in 2006 to 158 minutes in 2035. Table 3-6 shows the existing and future average bus round trip operating speeds and travel times on selected Metro bus routes.

3.3.2.2 Transit Accessibility and Connectivity

Although the project area contains several employment destinations, active retail centers, and stable residential neighborhoods, there are many more activity and employment centers located adjacent to, or outside, the project area. Project area travelers have limited options and accessibility to existing transit, due to the lack of direct connections to the regional rail system and continuing freeway and street system congestion that causes slow and over-burdened bus operations. Future corridor transportation improvements will need to reflect a multi-modal strategy providing travelers with a more complete set of transportation alternatives.

Table 3-6. Existing and Future Peak Period Average Bus Speeds and Travel Times

		Year 2006		Forecast 2035			
Line Name	Round Trip Distance (miles)	Round Trip Time (mins)	Average Speed (mph)	Round Trip Distance (miles)	Distance Trip Time		
Metro 258	25	98	15	25	133	11	
Metro 260	48	180	16	48	237	12	
Metro 265*	28	88	19	27	101	16	
Metro 266	46	147	19	46	202	14	
Metro 18	26	138	11	26	167	9	
Metro 66*	24	125	12	18	102	10	
Metro 108	35	146	14	35	171	12	
Metro 720**	NA	NA	NA	28	134	13	

Source: Metro Model 2006, 2035

^{*}Route is shorter in 2035 model than in 2006.

^{**}Route does not exist in 2006 model.



3.3.2.3 Transit Reliability

Currently, at least one bus route serves each major and secondary arterial in the project area. Seven transit providers offer a combination of community-based, local, limited stop, and freeway express service within the project area. The frequency of corridor service is not commensurate with the corridor's needs. Other challenges that face bus transit service in the project area include the following:

- Operational problems because of the congested arterial street system
- Poor regional transportation system connections
- Need for capacity enhancements to address increased demand and improve reliability for all riders, especially transit dependant

The effectiveness of corridor bus transit operations is severely impacted by arterial congestion, resulting in slower bus speeds with negative effects on schedule adherence, as well as decreased service reliability and increased travel times. Buses operating in congested conditions also result in higher operational and maintenance costs. Increased operational costs are incurred with the addition of buses and drivers (in an attempt to maintain the established service schedules), and higher maintenance costs resulting from the physical wear on buses from stop-and-go operations.

By 2035, corridor transit demand is estimated to increase by approximately 19 percent (Metro Model). Without significant improvements and capacity enhancement, the corridor's bus transit system will be substantially overburdened, and mobility to and from the corridor will be significantly constrained. There is an urgent need to improve transportation mobility and reliability in the project area by improving both the level and quality of transit service.

3.3.3 Regional Objectives

SCAG undertakes a variety of planning and policy initiatives across the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties to encourage a more sustainable Southern California. SCAG's responsibilities include maintaining a continuous, comprehensive, and coordinated planning process resulting in an RTP that provides a long-term investment framework for addressing the region's transportation and related challenges. In 2008, the SCAG Regional Council adopted the RTP, which presents the transportation vision for the region through the year 2035. Four key performance indicators measure the progress of the RTP shown in Table 3-7 for SCAG 2003 base year results, 2035 baseline projections, and 2035 objectives. Projects included in the RTP, such as the Eastside Transit Corridor Phase 2 Project⁷, are projected to contribute to the improved conditions in the 2035 Plan Objectives.

⁷ The Eastside Transit Corridor Phase 2 Project is identified as ID Number U1TR0717 in the 2008 SCAG RTP



Table 3-7. SCAG Performance Indicators

Performance Indicator	Performance Measurement		2003 Base Year	2035 Baseline	2035 Plan Objectives
Mobility	Average daily speed (miles per hour)		30.5 mph	26.8 mph	29.3 mph
	Average daily delay per capita		20.0 minutes	30.7 minutes	25.8 minutes
Accessibility	Percent PM peak period work trips within 45 minutes of residence	Autos: Transit:	77% 43%	77% 42%	79% 45%
Reliability	Percent variation in travel time*	Weekday 5:00 to 6:00 PM	28% (2005)	N/A	25%
Safety	Daily accident rate per million persons		28.9 (estimated from graph)	30.2 (estimated from graph)	30.1 (estimated from graph)

Source: SCAG, Regional Transportation Plan, 2008 Project Purpose *Percent variation in travel time means day-to-day change in travel time experienced by travelers. Variability results from accidents, weather, road closures, system problems and other non-recurrent conditions.



4.0 PURPOSE, GOALS, AND OBJECTIVES OF THE PROPOSED ALTERNATIVES

The purpose of the Eastside Transit Corridor Phase 2 Project is to provide area residents, businesses, and transit-dependent populations with a transit alternative connecting them to the rest of Los Angeles County via the Metro Gold Line Eastside Extension and the regional rail system.

In doing so, the project would improve mobility within the project area and offer a more sustainable transit alternative to address increased travel demand and projected growth, and to meet the following objectives:

- Serve the large number of transit-dependent and low-income residents in the project area;
- Increase access to major employment centers, activity centers, and destinations in the project area and LA County;
- Leverage transit investments from the Metro Gold Line Eastside Extension and Measure R projects to provide connections farther east; and
- Provide transit alternatives to alleviate roadway congestion, improve mobility options for enhanced quality of life, and provide a convenient and reliable alternative to the automobile.



5.0 MAJOR THEMES SUPPORTING THE NEED FOR TRANSIT IMPROVEMENTS

As previously stated in Section 1.4, there are numerous reasons underlying the need for transit improvements in the Eastside Transit Corridor Phase 2 project area.

These themes have emerged from SCAG forecasts, transportation research, travel forecasts, and planning studies such as the *Eastside Transit Corridor Studies: Re-Evaluation Major Investment Study (2000), Eastside Transit Corridor Phase 2 Alternatives Analysis Report (2009) and Eastside Transit Corridor Phase 2 Alternatives Analysis Addendum* (2009).

These seven major themes reinforce the need to provide a transit improvement within the project area that:

- Alleviates peak- hour congestion on the roadway network by providing transit alternatives to meet increased demand;
- Provides additional travel options, given the project area's high travel demand and connectivity constraints;
- Effectively gets people to the concentration of activity centers that exists within and adjacent to the project area;
- Addresses the demand for transit service and meets the needs of a transitdependent population;
- Accommodates areas of increased population and employment growth;
- Encourages transit-supportive land use and economic development opportunities; and
- Increases environmental benefits to meet air quality and state mandates.

The following sections discuss each theme in greater detail.

5.1 Peak-Hour Congestion on Roadway Network

As many studies suggest, there is a strong correlation between population growth and increased traffic congestion in suburban communities, like the Eastside Phase 2 project area, that rely heavily on the automobile as the primary mode of transportation.

As previously discussed in Section 1-4, increasing population and employment densities are a factor contributing to mounting congestion on the local arterial streets and freeways. Three of the major freeways in the area operate at level of service (LOS) F (severe congestion) during peak hours (see Figure 5-1). This is compounded by the congestion on major arterials in the project area.



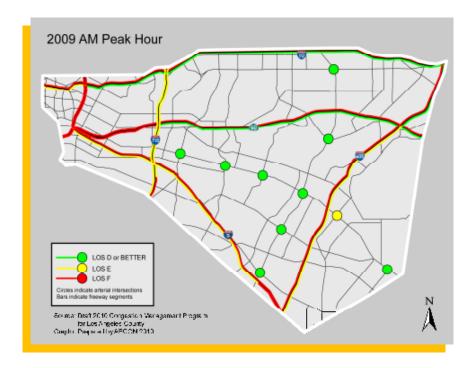
Intersections along several arterial streets, including the ones under consideration for the LRT build alternatives, are expected to experience increased travel times by 2035, as illustrated in Section 3. Increased travel time on freeways and arterials not only affects commuters in single occupancy vehicles, but also buses which share the right-of—way. Bus operators using the project area roadway network are increasingly stalled in traffic congestion. Providing a fixed guideway transit alternative would provide residents and commuters with a high capacity transit alternative that addresses the high levels of congestion currently experienced in the project area. The following section discusses how increases in travel demand, coupled with transportation network constraints, have impacted mobility options in the project area.

5.2 High Travel Demand, Limited Travel Options, and Constrained Connectivity

The regional transportation network includes 9,000 lane-miles of freeway, more than 42,000 lane-miles of arterials and several large public transit service providers, yet growth of the transportation system has not kept pace with the project area's population growth and the corresponding increases in transportation demand. As the population in the region doubled between 1960 and 2000, highway miles (all roadways) increased by less than 30 percent. The congestion caused by insufficient transportation capacity affects both personal travel and goods movement. If the current trends persist, travel delays are expected to rise and will deeply affect productivity and quality of life within the project area. Expanding the public transportation system will provide more choices for commuters and potentially reduce travel demand on the project area's major freeway and arterial systems.

Project area travel patterns identified in year 2006 model trip tables and year 2035 forecasts prepared by SCAG and Metro, respectively, are summarized below for person trips and transit trips. Spider diagrams of travel patterns are also presented, summarized by the project area and other Metro districts. Figure 5-2 shows the districts in the project area. Major activity centers in districts adjacent to the project area are identified in Table 5-1.





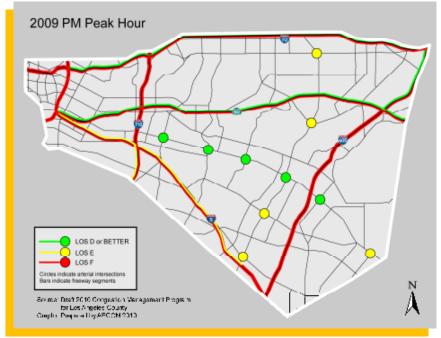


Figure 5-1. Freeway Level of Service





Source: Metro Travel Demand Model. Graphic Prepared by CDM/AECOM Joint Venture 2008

Figure 5-2. Eastside Study Model Districts



Table 5-1. Representative Activity Centers and Destinations Adjacent to Project Area

Model District(s)	Representative Activity Center or Destination	
Central Los Angeles and Central Business District (CBD)	Los Angeles CBD	
	Staples Center and LA Live	
	Hollywood	
	Dodger Stadium	
	University of Southern California	
	California State University, Los Angeles	
	Santa Monica	
	Culver City	
	Beverly Hills	
Westside	Venice Beach	
	Westwood	
	Rodeo Drive	
	UCLA	
	San Pedro	
	Long Beach	
Catavay	Compton	
Gateway	Paramount	
	Hawaiian Gardens	
	Cerritos College	
	Pasadena	
	Arcadia	
West San Gabriel Valley	California Institute of Technology	
	Pasadena Conference Center	
	Los Angeles County Arboretum and Botanical Garden	

Source: Major commercial, educational, recreational, employment and mixed use activity centers in Southern California, information provided by Los Angeles County, Regional Planning Dept., 2008



5.2.1 Person Trips

The "Person Trips" statistic is the total trips made by all travel modes. Figures 5-3a, 5-3b, 5-4a and 5-4b illustrate year 2006 and 2035 average weekday travel patterns (for all purposes) to and from the Eastside Transit Corridor Phase 2 project area, using spider diagrams.

The patterns for all-purpose trips indicate the following:

- The project area produced and attracted approximately 3.7 million all-purpose trips in 2006. Almost half of the trips, 45 percent, remained within the project area. This trend remains in 2035, the year by which the total is expected to grow to 4.4 million daily trips.
- The main destination districts in 2006/2035 for the remaining 55 percent of the daily trips originating in the project area are Central Los Angeles (14/11 percent), Gateway (13/12 percent) and West San Gabriel Valley (9/9 percent).
- The main production districts (apart from the project area) in 2006/2035 for the trips attracted to the project area happen to be the same ones as the major destination districts Central Los Angeles (9/10 percent), Gateway (14/12 percent) and West San Gabriel Valley (11/10 percent).

These findings indicate that many of the trips both originate and end in zones to the north, south, and west of the project area – areas already served by the Metro Rail system, although not directly connected to the project area.



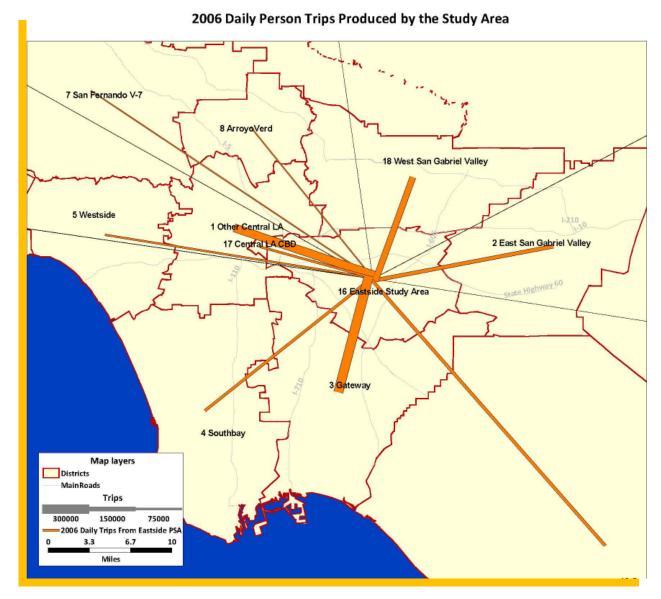


Figure 5-3a. Year 2006 Average Weekday Person Trips



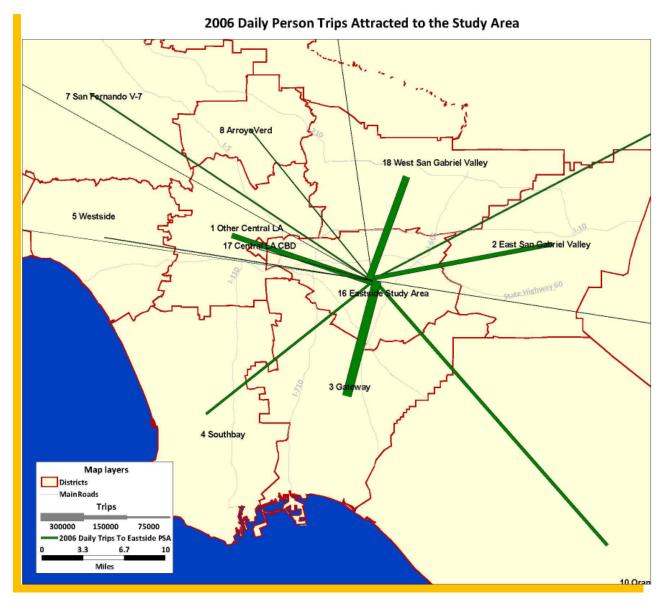


Figure 5-3b. Year 2006 Average Weekday Person Trips



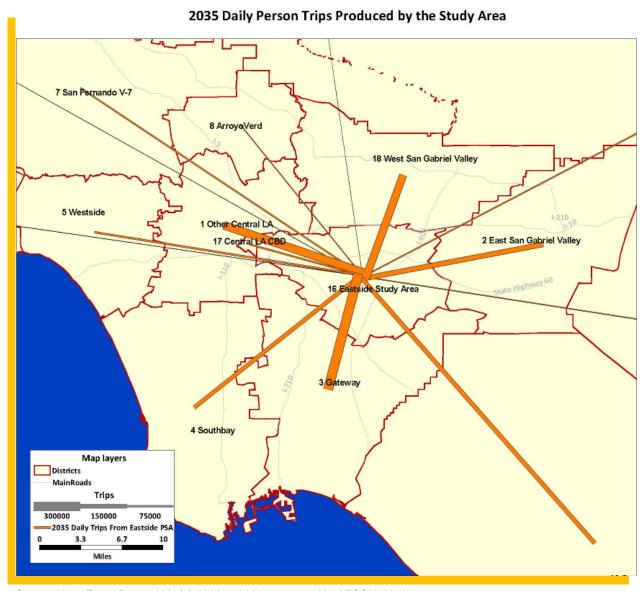


Figure 5-4a. Year 2035 Average Weekday Person Trips



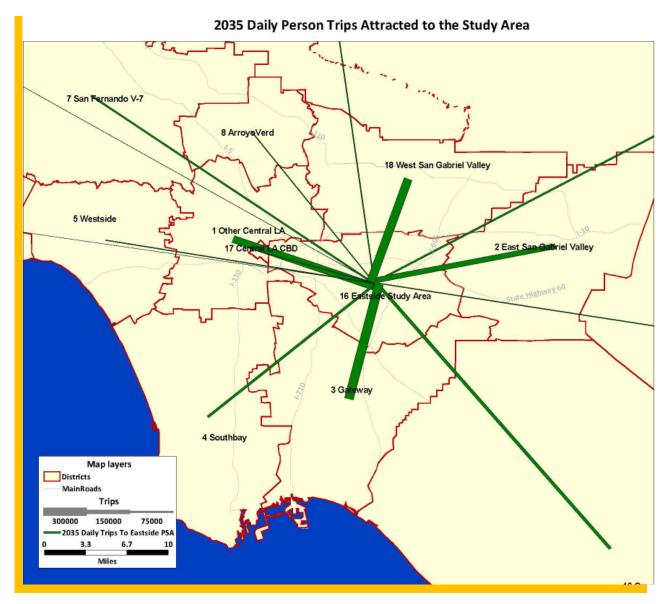


Figure 5-4b. Year 2035 Average Weekday Person Trips



5.2.2 Transit Trips

"Transit Trips" is a sub-set of "Person Trips," but includes only those that are made using public transit modes such as bus and rail. Figures 5-5a, 5-5b, 5-6a and 5-6b illustrate year 2006 and 2035 average weekday all-purpose transit travel patterns to and from the Eastside Transit Corridor Phase 2 project area, using spider diagrams. Similar to the person trips, the transit travel patterns show that many trips from the project area are going to the Westside, Central Los Angeles, and Gateway - areas served by the existing Metro Rail System. However, transit trips show a relatively stronger east-west movement to and from major employment centers in other districts. There is a strong predominance of transit trips to and from the Los Angeles CBD—the area best served by transit.

The patterns in transit trip making activity for the project area are similar to those observed for person trips. They can be summarized as follows:

- The project area produced and attracted approximately 114,000 all-purpose daily transit trips in 2006; 26 percent remained within the project area. The total number of daily trips is projected to increase to 145,000 in 2035. The percent of the projected all-purpose transit trips remaining in the project area is projected to increase to 32 percent by 2035.
- The main destination districts⁸ in 2006/2035 for the remaining 74/68 percent of the daily trips originating in the area included Central Los Angeles (17/21 percent), Gateway (9/9 percent), Westside (8/8 percent), CBD (11/8 percent), and West San Gabriel Valley (8/8 percent).
- The main production districts⁹ in 2006/2035 for trips attracted to the project area (apart from the project area) are Central Los Angeles (18/19 percent), Gateway (15/12 percent), and West San Gabriel Valley (10/8 percent).

⁸ Destination districts in this case are those outside the project area, which are compiled by an aggregate of Transportation Analysis Zones (TAZs)

Zones (TAZs).

⁹ Production Districts are those areas outside of the project area where people live, which are compiled by an aggregate of TAZs.



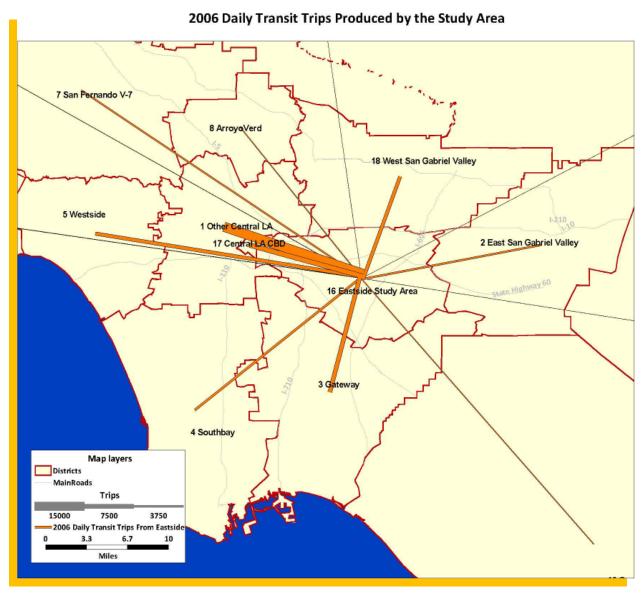


Figure 5-5a. Year 2006 Average Weekday Transit Trips



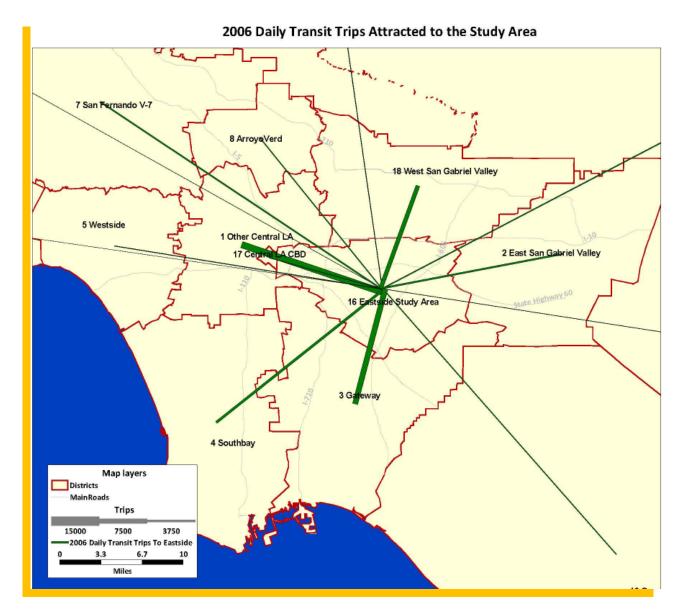
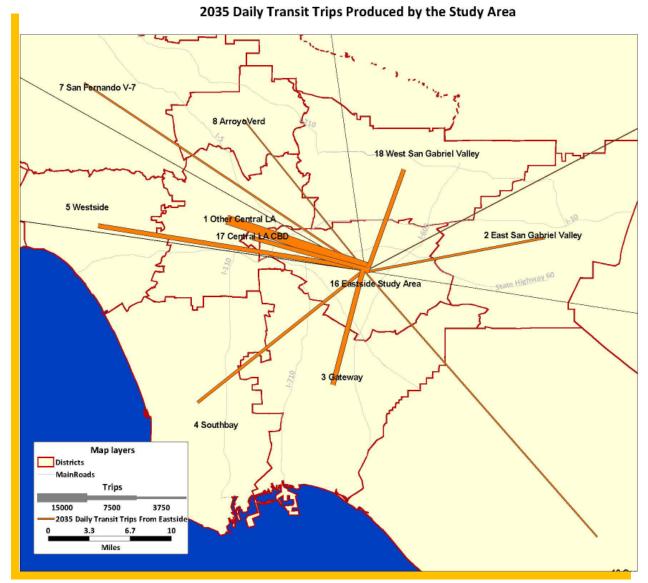


Figure 5-5b. Year 2006 Average Weekday Transit Trips





Source: Metro Travel Demand Model (2006 and 2035); prepared by AECOM, 2010

Figure 5-6a. Year 2035 Average Weekday Transit Trips



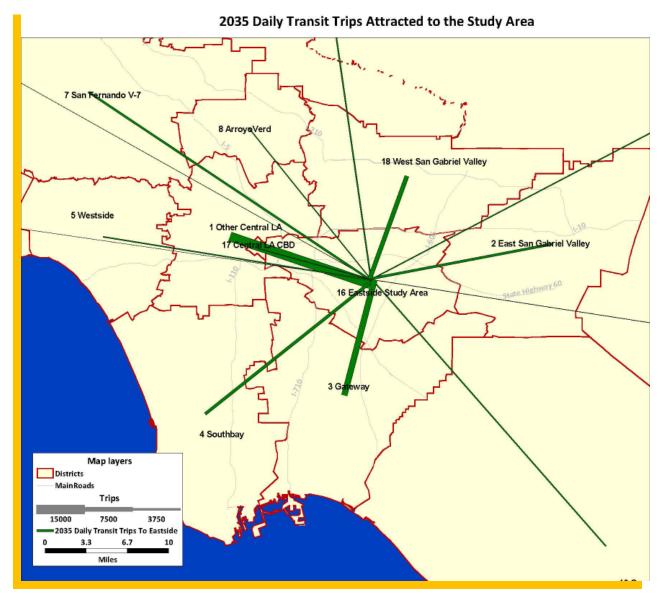


Figure 5-6b. Year 2035 Average Weekday Transit Trips



5.3 The Concentration of Activity Centers

The Eastside Transit Corridor Phase 2 Project would help alleviate the mobility constraints by providing a public transit alternative serving not only major regional employment centers, but also regional activity centers and destinations located in, and immediately adjacent to, the project area. These include large educational institutions, such as California State University's Los Angeles campus, Whittier College, and two community colleges (East Los Angeles and Rio Hondo). Major recreation areas which serve both local and regional residents include the Whittier Narrows Recreation Area and two public golf courses. Many people who are transit-dependent because of their inability to drive (e.g., some elderly and people with disabilities) would benefit from increased access to the area's medical centers, including Monterey Park Hospital, Beverly Hospital, Whittier Presbyterian Intercommunity Hospital, and Greater El Monte Community Hospital. In addition, many businesses, industrial, and commercial areas are organized around the main arterial streets in the cities of Whittier, Commerce, Montebello, Santa Fe Springs, and Pico Rivera. Table 5-2 provides a listing of these local and regional draws. Figure 5-7 illustrates the major activity centers within the project area. Many of the cities are also planning large-scale redevelopment projects, such as retail and residential facilities that would interface well with increased transit service. Figure 5-8 identifies a few of the major redevelopment projects proposed for the project area¹⁰.

5.4 Transit-Dependent Populations and Transit Usage

There is a need to provide transit service to the project area's high number of young and elderly residents. As of 2000, more than 42 percent, or roughly 276,000, of the project area population is under the age of 18 or over 65. In addition, 19 percent of the population is low-income, and 16 percent does not have access to a vehicle. These percentages are higher than in Los Angeles County as a whole, and are likely to remain so through 2035. The following text provides more detailed discussion of these populations. Table 5-3 shows the concentration of transit-dependent populations in the project area.

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¹⁰ This section identifies potential redevelopment plans within the project area as illustrated in Figure 5-8. While some of these projects are not currently under construction, they are included as examples of where planned growth and increased activity center development is targeted within the project area.



Table 5-2. Major Activity Centers

Name	City	Туре
Citadel Outlet Collection	Commerce	Commercial
Commerce Casino	Commerce	Recreational
Beverly Hospital	Montebello	Medical
Montebello Civic Center	Montebello	Civic
Montebello Country Club	Montebello	Recreational
Montebello Downtown Plaza	Montebello	Commercial
Montebello Mart	Montebello	Commercial
Montebello Plaza	Montebello	Commercial
Montebello Town Square	Montebello	Commercial
The Shops at Montebello	Montebello	Commercial
Atlantic Square	Monterey Park	Commercial
East Los Angeles College	Monterey Park	Educational
Monterey Park Village	Monterey Park	Commercial
Crossroads Plaza	Pico Rivera	Commercial
Pico Crossing	Pico Rivera	Commercial
Pico Rivera Civic Center	Pico Rivera	Civic
Pico Rivera Plaza	Pico Rivera	Commercial
Pico Rivera Towne Center	Pico Rivera	Commercial
Pico Rivera Village Walk	Pico Rivera	Commercial
Whittier Narrows Golf Course	Rosemead	Recreational
Santa Fe Springs Market Place	Santa Fe Springs	Commercial
Greater El Monte Community Hospital	South El Monte	Medical
Pico Rivera Sports Arena	Whittier	Recreational

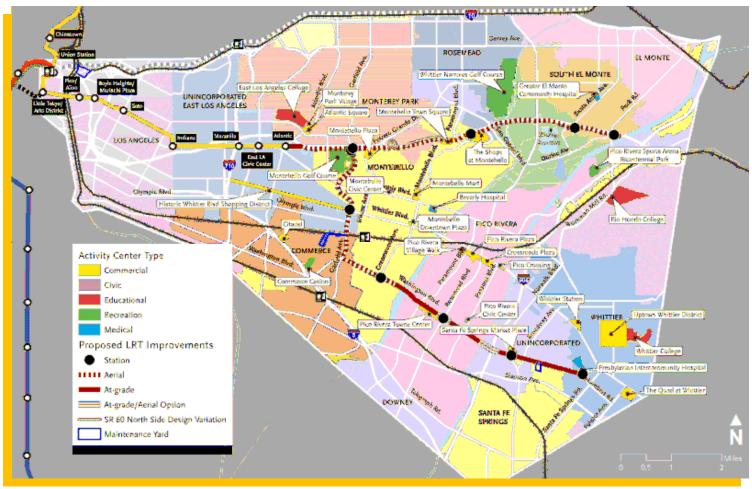


Table 5-2. Major Activity Centers (continued)

Name	City	Туре	
Presbyterian Intercommunity Hospital	Whittier	Medical	
Rio Hondo College	Whittier	Educational	
The Quad At Whittier	Whittier	Commercial	
Uptown Whittier District	Whittier	Commercial	
Whittier College	Whittier	Educational	
Whittier Station	Whittier	Commercial	
Historic Whittier Boulevard	Los Angeles County	Commercial	

Source: Cities of Commerce, Montebello, Monterey Park, Pico Rivera, Rosemead, Santa Fe Springs, South El Monte, and Whittier and Los Angeles County, Department of Regional Planning, 2010

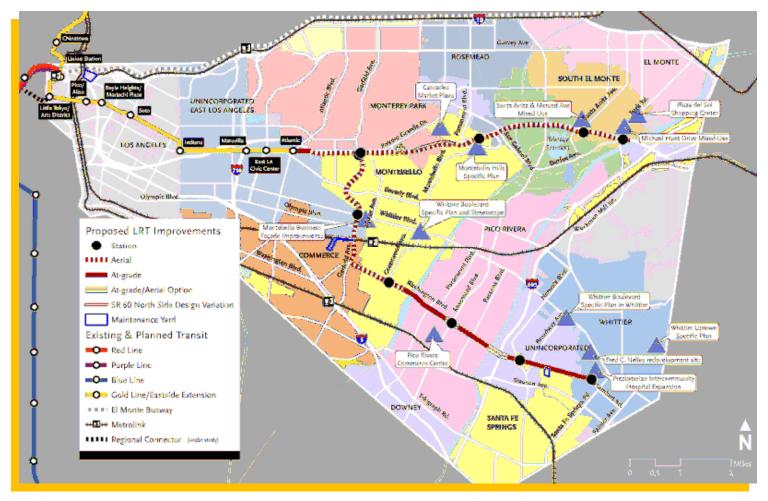




Source: Los Angeles County, Department of Regional Planning and Cities of Commerce, Montebello, Monterey Park, Pico Rivera, Rosemead, Santa Fe Springs, South El Monte, and Whittier, 2010; prepared by CDM/AEOCM Joint Venture, 2010

Figure 5-7. Major Activity Centers in Project Area





Source: Cities of Commerce, Montebello, Monterey Park, Pico Rivera, Rosemead, Santa Fe Springs, South El Monte, and Whittier 2010; prepared by CDM/AEOCM Joint Venture, 2010

Figure 5-8. Proposed Redevelopment Projects in Project Area



Table 5-3. Transit-Dependent Communities in the Project Area, 2000

Category	Number of Households or People	Project Area Population Percentage	Los Angeles County Population Percentage
Age 18 and under	210,679	32.3	29.4
Age 65 and over	66,256	10.2	9.7
Low-Income Households	33,415	19.3	17.0
Zero-Vehicle Households	27,112	15.7	12.6

Source: 2000 U.S. Census; CDM/AECOM Joint Venture, 2010

5.4.1 Zero-Vehicle Households

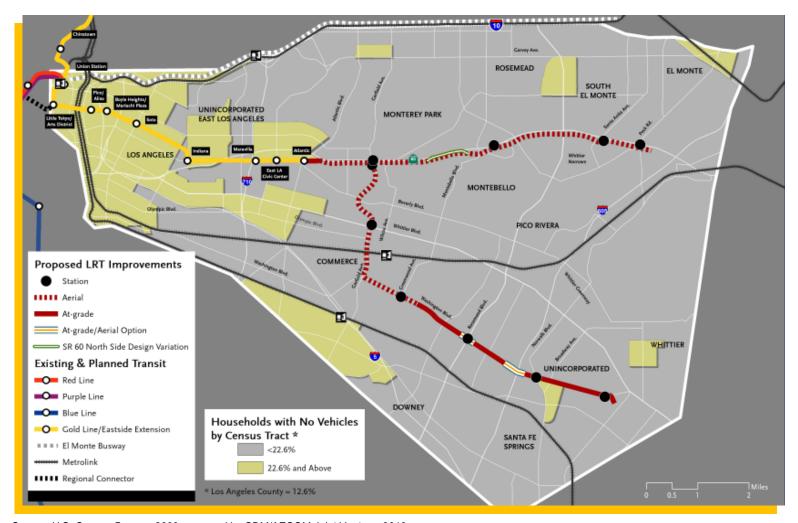
Almost 13 percent of Los Angeles County households are without a vehicle. The project area has a higher proportion of zero-vehicle households: 16 percent. As shown in Figure 5-9, households in eastern Los Angeles County have a higher concentration of zero-vehicle households. The figure highlights census tracts where over 20% of households do not have access to a vehicle. Census tracts in the cities of Montebello, Santa Fe Springs, Whittier and unincorporated Los Angeles County also show high concentrations of zero-vehicle households. This population represents those most often in need of transit service. Without reliable access to a vehicle, they may rely on public transportation as the primary mode of travel.

5.4.2 Low-Income Households

Within the project area, the largest concentration of low-income households - those earning less than \$15,000 per year¹¹ - is located predominately in the cities of Montebello and Pico Rivera. Portions of South El Monte, Rosemead, and Monterey Park have high concentrations of low-income households as well. Of project area households, 19 percent have an income of less than \$15,000 per year, while 17 percent of Los Angeles County households are classified as low-income. Figure 5-10 illustrates these data.

¹¹ As provided by 2000 Census Data Tract Information.

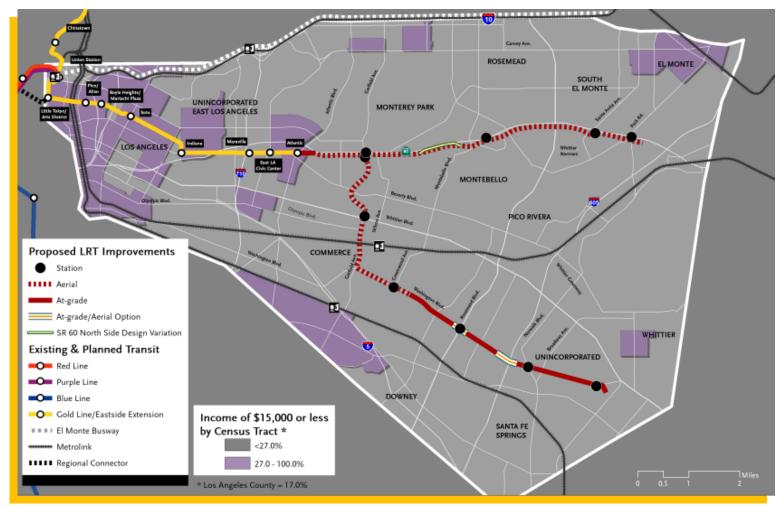




Source: U.S. Census Bureau, 2000; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-9. Households with Zero Vehicles





Source: U.S. Census Bureau, 2000; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-10. Low-Income Households



5.4.3. Median Household Income

The median household income in 2000 for census tracts in the project area is \$33,437 (year 1999 dollars). Los Angeles County's median household income is \$42,189. The majority of areas surrounding the two proposed LRT Build Alternatives have median household incomes of \$30,000 or above. However, a portion of the project area along Garfield Avenue contains median incomes in the range of \$20,000 to \$29,999. Figure 5-11 illustrates project area median household income.

5.4.4. Summary of Transit Dependency

Based on the analysis provided in Section 5.4, portions of the project area contain proportions of transit-dependent populations higher than those in Los Angeles County, including the young, elderly, low-income households, and households that do not own a vehicle. These groups are likely to increase with projected population growth. There is a need to provide reliable and high capacity transit to meet the needs of both existing and future transit-dependent populations. Currently these populations are served by bus as the primary transit alternative in the project area. Transit solutions should explore ways to meet demand by providing an alternative that does not add to the increasing congestion experienced on the roadway network in the project area.

5.5 Growing Population, Employment, and Housing Densities Support Transit Usage

Population, employment, and housing densities are three factors that influence transit use. As these densities increase, the project area will experience increased demand on an already congested roadway network, as well as an increased need for alternative mobility options. The 2010 and 2035 population data for the project area and Los Angeles County are presented in Table 5-4, based on SCAG projections¹². The table shows that the project area population is anticipated to grow by 12 percent, gaining approximately 86,000 people between 2010 and 2035. Los Angeles County's population is anticipated to grow by approximately 16 percent, gaining approximately 1.7 million people from 2010 to 2035.

5.5.1 Population

The 2010 population density in the project area varies from less than 6,000 (i.e. the lowest quintile) to more than 40,000 (the highest quintile) people per square mile. The majority of the project area has population density in the two lowest quintiles: 6,000 people or less and 6,000 to 11,999. The denser parts are concentrated primarily in the East Los Angeles County portions of the project area. Many parts of the project area with low population densities (below 6,000) are located in areas along the SR 60 to the north, where the freeway is bound by commercial, manufacturing and recreational uses. The same is true of low-density areas in the lower southeast portion of the project area along Washington Boulevard, where manufacturing and commercial are the predominant land uses. See Figure 5-12 for 2010 population density in the project area.

Population, household and employment data are based on projections developed by SCAG. The estimates are based on 2000 U.S. Census data and projected based on updated and adopted forecast methodology from SCAG. The data used for this report are based on the SCAG adopted 2008 RTP Growth Forecast available on SCAG's website http://www.scag.ca.gov/forecast/index.htm.



As shown in Figure 5-13, in 2035 the projected population density in the project area will remain mostly the same, except in portions of South El Monte, Pico Rivera, unincorporated Los Angeles County, and Whittier. In these areas, the population density will increase, with a higher concentration of denser pockets.

5.5.2 Employment

As shown in Table 5-4, total employment in the project area in 2010 reached 311,296 jobs. It is projected to grow to 332,708 jobs by 2035. This represents a 7 percent increase in employment within the project area. Figure 5-14 illustrates the 2010 employment densities in the project area. The figure shows that the highest employment density is located in a section of Rosemead near South El Monte that contains employment densities in the range of 13,000 to 33,999 jobs per square mile. Other high-density employment areas ranging from 6,000 to 13,000 jobs per square mile can be found in South El Monte, Commerce, and Whittier.

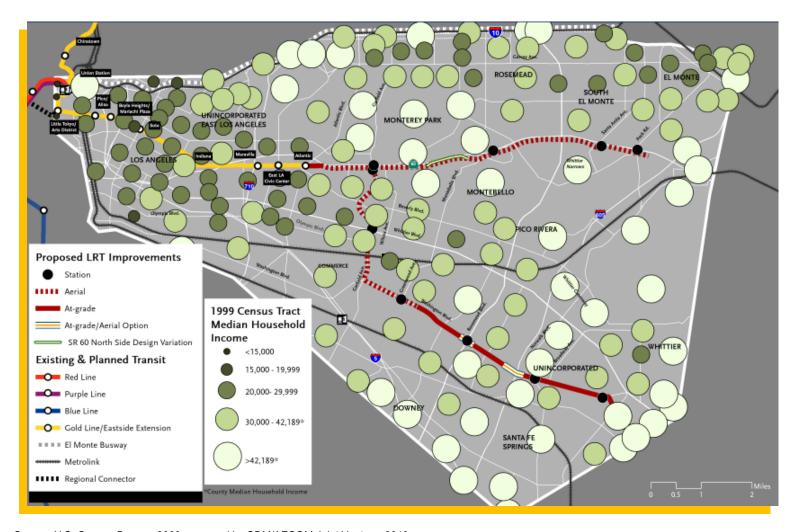
Employment trends and locations will remain roughly the same through 2035 (Figure 5-15). Employment density will increase in portions of East Los Angeles County, Whittier, and South El Monte.

Table 5-4. Population and Employment Growth

	2010	2035	% Change	
Population				
Project Area	720,850	807,567	12.0	
Los Angeles County	10,615,700	12,338,623	16.2	
Project Area as % of Los Angeles County	7%	7%	-	
Employment				
Project Area	311,296	332,708	6.9	
Los Angeles County	4,552,385	5,041,181	10.7	
Project Area as % of Los Angeles County	7%	7%	-	

Source: 2000 U.S. Census, projections based on SCAG's RTP model; CDM/AECOM Joint Venture, 2010





Source: U.S. Census Bureau, 2000; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-11. Median Household Income



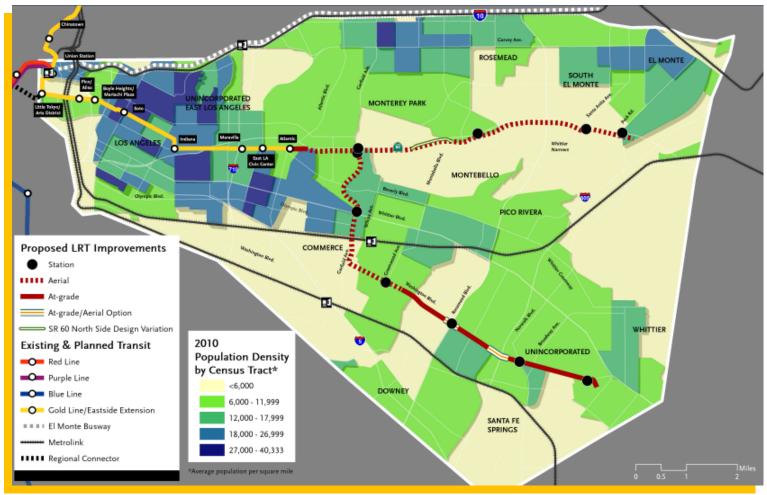


Figure 5-12. 2010 Population Density



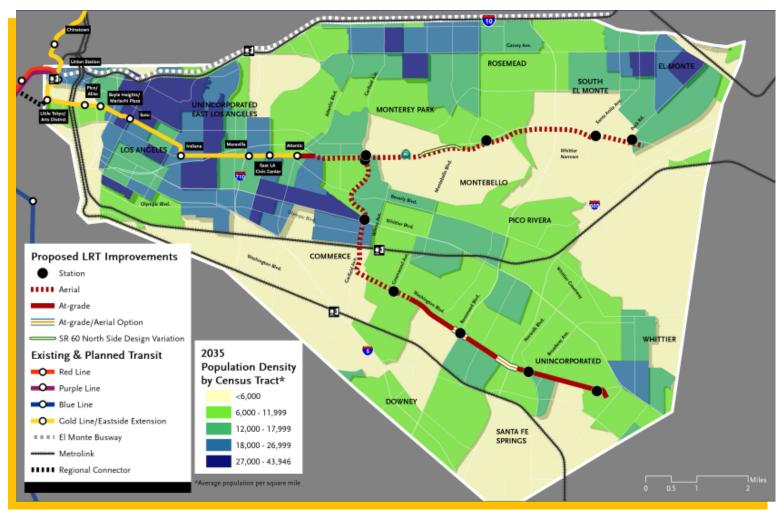


Figure 5-13. 2035 Population Density



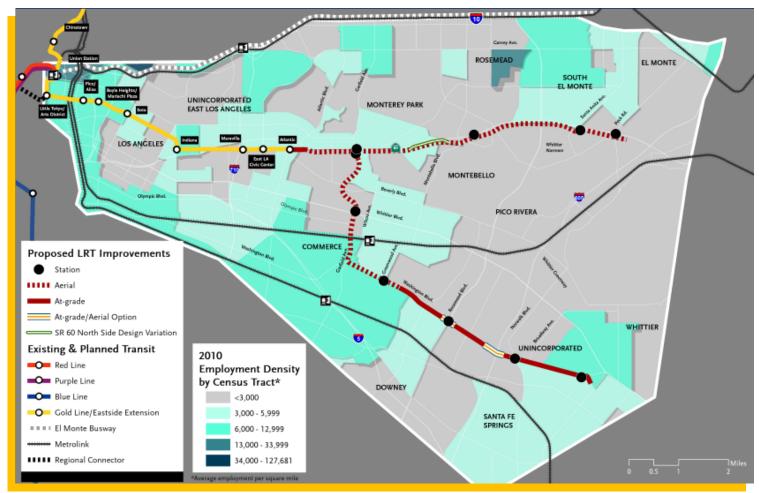


Figure 5-14. 2010 Employment Density



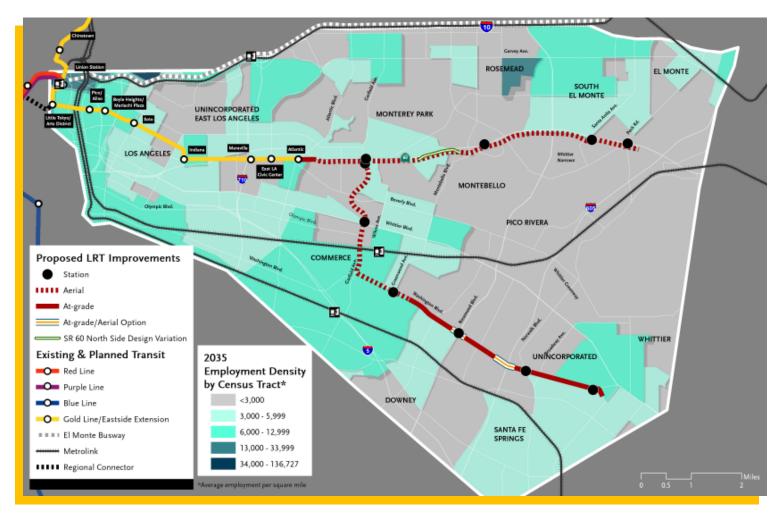


Figure 5-15. 2035 Employment Density



5.5.3 Households

Household densities range from less than 1,000 to 9,700 homes per square mile in the project area. Figure 5-16 illustrates the 2010 household densities. East Los Angeles County contains the highest household densities, ranging between 6,000 and 9,700 households per square mile. Other pockets of high household density include Montebello, South El Monte, Monterey Park, and Whittier. In Montebello and South El Monte, household densities range between 2,000 and 6,000 per square mile; in Whittier and Monterey Park, some household densities reach 6,000 to 9,700 per square mile. These same areas will experience similar growth in household density by 2035. Figure 5-17 illustrates 2035 household densities within the project area.

5.6 Transit-Supportive Land Use Policies and Conditions

As research has shown, there is a strong correlation between redevelopment, revitalization, compact land uses and transit investments. Governmental agencies such as the FTA have included analysis of transit-supportive land use policies as part of their consideration of the New Starts Funding process¹³. Transit can help improve accessibility and mobility for communities, connecting them to major centers, and create opportunities for economic development by concentrating compatible land uses in and around transit stations. To maximize the benefits of a transit investment, incorporated cities, which regulate land use in Los Angeles County within their boundaries, are also asking fundamental questions about the connection between land use and transportation. Many of the cities within the project area understand the importance of smart growth and transit-supportive policies, which seek to further align transit and land use policies. As the urban form of the cities in the project area continues to evolve, many of the jurisdictions have existing policies that support transit, or are looking to update planning documents in support of transit investments that would improve access and connections between home, work and other destinations, as well as allow greater economic development opportunities to their city.

This section reviews planning documents of jurisdictions in the project area, including General and Specific plans. The County of Los Angeles provides a General Plan, land use policies, specific plans, and a zoning ordinance for those unincorporated areas within the project area. Most of these planning and policy documents are informed by the directives put forward by SCAG. SCAG's data, research and policy recommendations are a conduit to ensuring a coordinated planning process at the regional level. Figure 5-18 provides a map of existing land uses in the project area. In addition, cities in the project area have General Plans that serve as the blueprint for planning and development and articulate a vision for future growth. General plans in California are composed of seven statemandated elements addressing growth. The most relevant elements to this study are land use and circulation.

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¹³ The U.S. Department of Transportation, Federal Transit Administration, Office of Planning provides guidelines and standards for assessing transit-supportive land use. More information on this can be found at www.fta.dot.gov



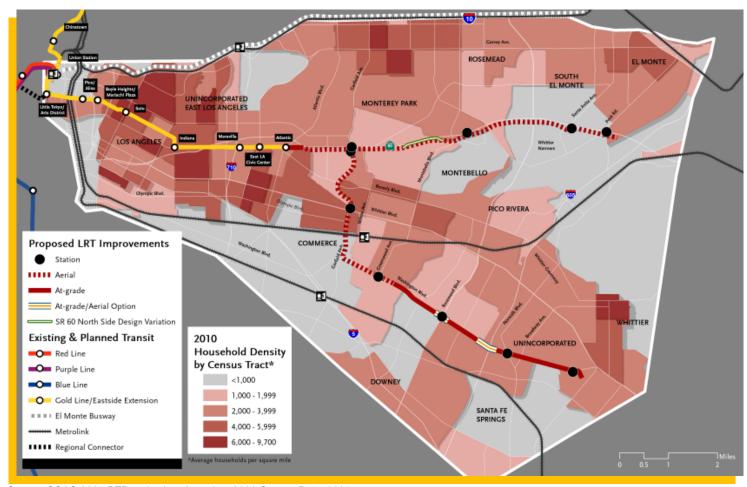


Figure 5-16. 2010 Household Density



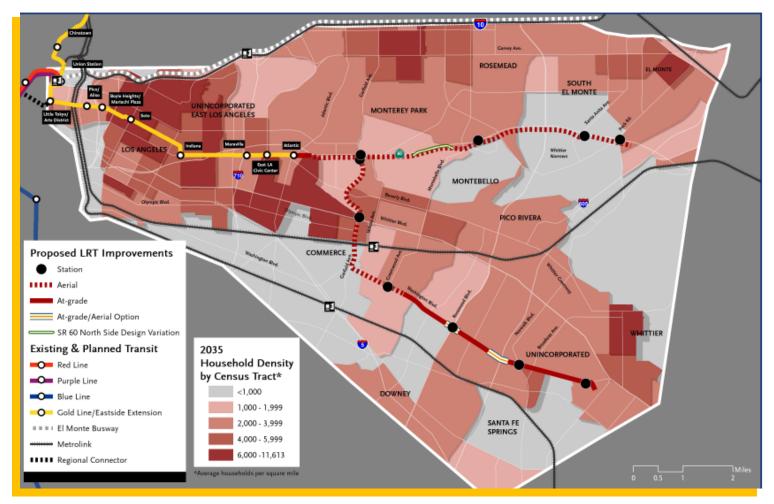
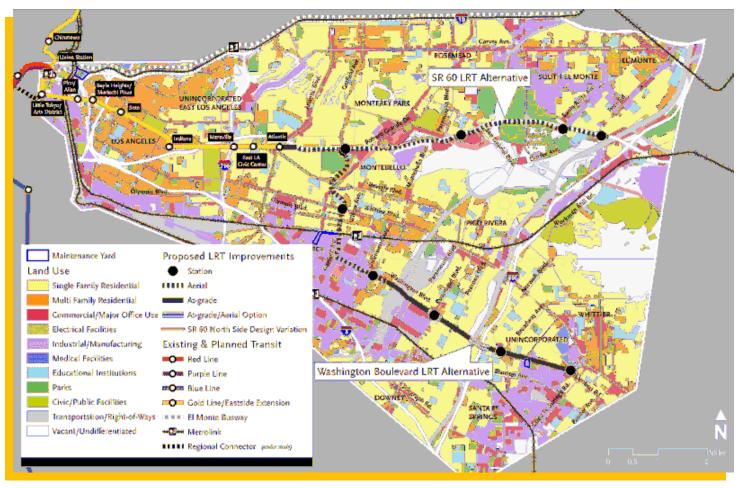


Figure 5-17. 2035 Household Density





Source: California Spatial Information Library 2007; prepared by CDM/AECOM Joint Venture, 2010

Figure 5-18. Existing Land Use



The land use character of the project area has evolved over the last 100 years. Los Angeles, and the project area in particular, were shaped in the early 1900s by the expansion of the railroads. Interurban rail connections to Whittier from downtown Los Angeles impacted the shape of cities in the southern portion of the project area. Many cities maintain areas with a small downtown character and a "main street" feel. Other areas were shaped by patterns of suburbanization that prevailed in Southern California with the proliferation of the automobile, starting in the early twentieth century and gathering momentum after World War II. Over the last few decades, jurisdictions in the Eastside Transit Corridor Phase 2 project area have adopted transit-supportive land use policies and programs. Others, currently in the process of amending general and specific plans, are looking to increase opportunities for economic development by opting for smart growth and transit-oriented land use solutions.

Los Angeles County last adopted its General Plan in 1980. The county supports land use policies that go hand in hand with existing and proposed transportation investments. Currently, the county is updating its General Plan. Draft documents provide insight into the county's plan for growth and development in unincorporated areas. The Land Use Element promotes compatible land use arrangements that reduce private automobile dependency in order to minimize related social, economic, and environmental costs. In order to address sustainable development, the county encourages transit-oriented development along major transit corridors. The Circulation Element stresses the need for a multi-modal transit network to serve Los Angeles County.

The <u>city of Pico Rivera</u> General Plan is currently being updated. The previous version supports the expansion of transit routes through development of convenient facilities that support transit service. The Circulation Element aims to improve and coordinate the local street system with regional transportation planning efforts, and to encourage the conversion of private streets to public rights-of-way. Ultimately, these policies seek to ensure that major corridors in Pico Rivera provide adequate connections to the regional transit network. In addition, the city of Pico Rivera's Rancho de Bartolo Specific Plan promotes the use of public transit in the area as part of the Circulation Element's guiding principles.

The <u>city of Whittier</u> is concerned with pedestrian enhancements and street design in order to provide a more transit-oriented environment, specifically in its Uptown center. The Whittier Specific Plan states that Uptown currently possesses several elements crucial for all forms of transit, such as streets with planters and trees, a slow street grid, and walkable sidewalks. Aside from street modifications, the Specific Plan recommends high-density residential development land use, since historically dense walkable areas have the highest transit ridership potential. However, in order to accommodate this land use, there is a need to improve transit service by providing greater choice of routes to regional destinations like large retail centers or entertainment venues, and more frequent service to regular destinations such as employment centers. In addition, the Whittier Boulevard Specific Plan contains a strategy for increasing transit options along Whittier Boulevard through improved bus service frequency, and by pursuing a multi-modal transit station near the Five Points intersection.

The city of Santa Fe Springs General Plan supports the development of regional transportation facilities which ensure the safe and efficient movement of people and goods. Santa Fe Springs implements this goal by maintaining a proactive and assertive role with appropriate agencies dealing with regional transportation issues affecting the city.



The <u>city of South El Monte</u> 2000 General Plan encourages increased use of public transportation, as well as the maintenance of easy, convenient access to and from South El Monte via SR 60 and Rosemead Boulevard. To ensure that these goals are met, South El Monte supports Metro's efforts to increase the use of mass transit and other alternatives to the private automobile. Additionally, South El Monte is looking for immediate solutions to establish bus stops at appropriate locations to adequately serve employment centers and provide transit connections.

The <u>city of Commerce</u> 2020 General Plan identifies circulation strategies to support both the transportation system and economic development. Development and land use plans will be modified to balance the city's bus service. For example, development of employment and commercial centers will be situated along major corridors, supported by better transit service. Transit centers may also be considered as part of new developments such as the entertainment corridor along Telegraph Road. General Plan policies also specify coordination with local transportation agencies to establish routes, stops, and stations for a safer and more efficient intercity system.

The <u>city of Monterey Park</u> General Plan recommends identifying short- and long-term mobility needs throughout the city. To ensure that these needs are met, Monterey Park supports investing in the establishment of multi-modal transit centers, including one at East Los Angeles Community College. In addition, the General Plan requires new non-residential development projects to accommodate transit at appropriate locations. It also discusses the importance of partnership opportunities between the public and private sectors to further integrate transit services. Monterey Park's Operating Industries Incorporated (OII)/Edison Specific Plan focuses on the southeast corner of the city, and supports the pursuit of public infrastructure improvements that will support and facilitate redevelopment of the OII/Edison area.

The <u>city of Montebello</u> existing General Plan includes a goal to improve municipal bus lines that accommodate and service new development, including development of transit terminals. Montebello is currently in the process of updating its General Plan. In addition, the city has developed a Montebello Hills Specific Plan to accommodate a new infill residential community to target mixed-use development and coordinate transportation services.

The <u>city of Rosemead</u> General Plan stresses improved transportation facilities that will effectively serve future developments proposed in the Land Use Element. The plan seeks to promote alternative modes of travel and higher use of transit, including a centralized transit center that links local routes with commuter routes to downtown Los Angeles and other major job centers.

The importance of the transportation and land use connection is reinforced by the policies of cities in the project area. The planning documents summarized above illustrate some of the policies and guidelines that cities are recommending to improve transit, target growth, and mitigate traffic congestion in the area.

Additionally, cities in the project area have expressed interest in coordinating with Metro on land use visioning as part of the urban design process that was initiated during the alternatives analysis for the Eastside Transit Corridor Phase 2 Project. The connection between land use and transit has led to discussions with city staff and decision-makers. For those jurisdictions currently involved in updating



their General Plans and Specific Plans, it has led to consideration of including transit-supportive land use and redevelopment policies in support of Metro's proposed transit investments.

5.7 Environmental Benefits Addressing Air Quality and State Mandates

Los Angeles is one of the most congested metropolitan regions in the nation. The growing concern over global climate change and poor air quality is a real concern for residents of the county. The use of fossil fuels for transportation generates large amounts of carbon dioxide emissions, which continue to disrupt progress toward improving air quality and slowing climate change. Investments in public transportation and clean energy are viable strategies to improve the situation.

From 2004 to 2006, VMT per household in the SCAG region declined for two consecutive years, while the county saw a six percent increase in transit boardings. These changes are due in large part to investments in the regional public transportation system. Investments in public transportation can contribute to alleviating the air quality challenges faced by the region and mitigating the negative effects suffered by Southern California residents. (Source: SCAG 2007 State of the Region.)

Several agencies and laws regulate air quality in the United States at the federal, state, and local levels. The United States Environmental Protection Agency (USEPA) governs air quality across the United States and administers the Federal Clean Air Act (CAA). The CAA sets National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The USEPA has classified the South Coast Air Basin (SCAB) as a maintenance area for carbon monoxide (CO) and a non-attainment area for ozone (O₃), and fine particulate matter (PM2.5 and PM10).

In addition to being subject to CAA requirements, air quality in California is governed by the California Clean Air Act, which is enforced by the California Air Resources Board (CARB). CARB requires all air districts in the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS). CAAQS define the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. CARB also develops regional greenhouse gas emission reduction targets as required by Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, and Senate Bill 375 (SB 375). AB 32 provides the statutory basis for statewide 2020 greenhouse gas emissions reduction goals, and SB 375 enhances California's ability to reach its AB 32 goals by establishing regional greenhouse gas reduction goals, including goals for the region managed by SCAG, and by promoting good planning with the goal of more sustainable communities.

The Eastside Transit Corridor Phase 2 Project will evaluate transit alternatives that would contribute to improved mobility and air quality. The need for a transit solution that would improve air quality and be environmentally sustainable is important to the project area and the region as a whole.



6.0 POTENTIAL TRANSIT MARKETS

This section of the report provides an analysis of potential transit markets that would benefit from and contribute to ridership on the Eastside Transit Corridor Phase 2 Project. Potential travel markets take into consideration the location of activity centers within and near the project area, major areas of population and employment density in the project area, and travel patterns to and from the project area. An analysis of these factors helps to identify the potential level of ridership, the types of trips that could be served (work, school, entertainment, recreation, etc.), and the areas of origin and destination that would benefit from a transit investment in the project area.

6.1 Activity Centers and Destinations

As discussed in Section 5.3, the Eastside Transit Corridor Phase 2 project area has a high concentration of activity centers and major attractions. In addition to the various neighborhood centers that exist throughout the eight jurisdictions in the project area, there are other regional draws including commercial, medical, civic, and educational facilities. The locations previously illustrated in Figure 5-7 identify the major activity centers in the project area which can serve as potential travel markets. These activity centers are described below in further detail:

Commercial: The project area draws local and regional patrons to major commercial malls and town centers where they can access a variety of shopping, dining, and entertainment venues. Over the past few years, various jurisdictions in the area have modified shopping areas along their major east-west arterials and freeways (including SR 60) to capture constituents and patrons traveling through the corridor. These include destinations such as the Shops at Montebello (formerly the Montebello Town Center), a regional indoor mall; Monterey Park Village and Atlantic Square (two adjacent retail centers); the Pico Rivera Towne Center, a cluster of shopping centers along Washington Boulevard including national chain stores, restaurants, and entertainment (nightclub and dining venues, as well as local businesses); and the Citadel, a regional destination in the city of Commerce offering outdoor shopping, business offices, and a hotel. In additional to regional shopping centers, there are various locations in the project area that offer commercial and entertainment businesses in a more walkable "main street" environment. The stretch along Whittier Boulevard includes the Historic Whittier Boulevard Shopping District, Montebello Downtown Plaza, Pico Rivera Village Walk, Crossroads Plaza, Pico Crossing, and Whittier Station. Additionally, just east of Whittier Boulevard is the Uptown Whittier District; with its grid of main streets. This area provides access to dozens of commercial, business, and entertainment venues, serving local and regional patrons as well as students attending the immediately adjacent Whittier College.

Medical: The project area is home to some of the region's largest medical facilities. These destinations provide local and regional residents with jobs and access to hospital care. The two largest facilities are Beverly Hospital and Presbyterian Intercommunity Hospital (PIH).

Civic: The project area is composed of eight cities and unincorporated portions of Los Angeles County. Several jurisdictions have civic centers located in the project area. These facilities offer civic services, access to libraries, and community events.



Educational: Local and regional residents are served by three institutions of higher learning in the project area: two community colleges and one private four-year college. The East Los Angeles Community College has an annual enrollment of approximately 20,000 students - the highest enrollment of any of the nine Los Angeles Community College District sites (Institutional Research Data System, 2009). Rio Hondo Community College provides educational services to another 20,000 students (Rio Hondo Community College District, 2009). Whittier College, a small private liberal arts college in the southeast portion of the project area, serves another 2,000 students each year. Combined, these educational institutions serve approximately 42,000 students annually. Many of these commute to and from campuses in the project area.

6.2 Adjacent Districts and Regional Destinations

In addition to activity centers in the project area, major destinations in adjacent districts attract many project area residents for employment and other purposes. The districts which attract the highest number of area residents are Central Los Angeles, including the Central Business District, and the Gateway, Westside, and West San Gabriel Valley districts. Los Angeles County is home to nationally and world recognized attractions, with commercial, entertainment, and cultural destinations in districts north and west of the project area, such as:

- Dodger Stadium;
- Hollywood;
- Beverly Hills;
- Rodeo Drive;
- Santa Monica 3rd Street Promenade and Pier;
- Long Beach; and
- Pasadena.

Large educational institutions located to the north, south and west of the project area are also regional draws for travelers to and from the project area, such as the University of Southern California (USC), California State University, Los Angeles (CSULA), California State University, Long Beach (CSULB), and the University of California, Los Angeles (UCLA). Furthermore, some of the largest employment districts in Southern California are located in Central Los Angeles and the Westside. Many of these districts already benefit from connections to the Metro Rail system. A transit improvement in the project area would better connect patrons in eastern Los Angeles County to major economic, commercial, entertainment, and educational activity centers in neighboring districts. Major activity centers in districts adjacent to the project area are identified in Table 5-1. Districts are illustrated in Figure 5-2.

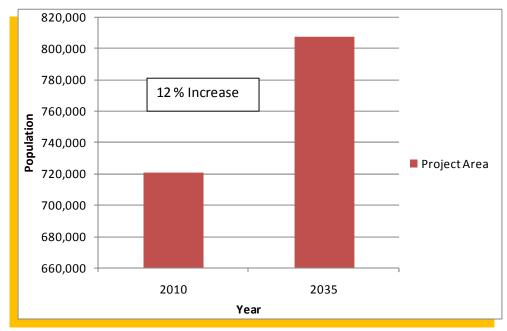


6.3 Population

The population of the project area in 2010 was approximately 721,000, seven percent of the population of Los Angeles County. The population of the project area surpasses the population of major cities such as Boston and Washington D.C., which have mature transit systems (as reported in 2009).

SCAG projections estimate that by 2035, the population will grow by 12 percent, reaching roughly 808,000 By 2035, the size of the project area will rival the population of other urbanized areas with extensive transit networks, such as San Francisco (approximately 815,000 residents in 2009). Table 5-4 provides existing and projected population growth in the project area and Los Angeles County as a whole. Figure 6-3 illustrates the projected population growth in the project area between 2010 and 2035, and Figure 6-4 provides this information for Los Angeles County by comparison.

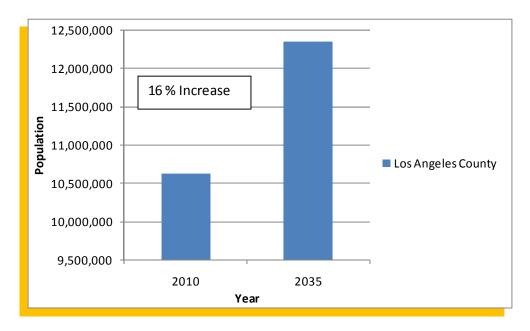
Given the project area's expected growth within an already congested network system, there is a need for an efficient and reliable system that will meet the demand of this growing transit market, improve access and mobility, and enhance quality of life, while providing an alternative to increasing congestion.



Source: U.S. Census 2000, SCAG projections 2010. Graphic prepared by CDM/AECOM Joint Venture, 2010

Figure 6-3. Population Growth for Project Area 2010-2035





Source: U.S. Census 2000, SCAG projections 2010. Graphic prepared by CDM/AECOM Joint Venture, 2010

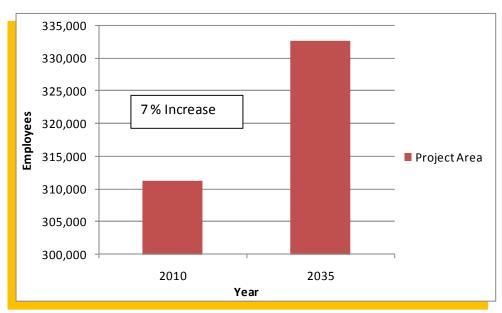
Figure 6-4. Population Growth for Los Angeles County 2010-2035

6.4 Employment

As indicated in Table 5-4, recent figures indicated that there are approximately 311,000 jobs in the project area. This number is projected to increase by seven percent to roughly 332,000, by 2035. Los Angeles County's employment rate is estimated to increase by eleven percent within the same period.

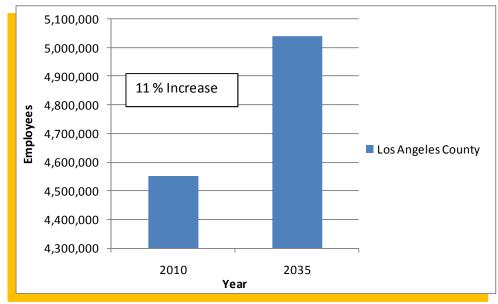
The slower rate of employment growth for the project area is related to the fact that many residents travel to regional employment centers outside the project area. The largest attractors for employment are found in Central Los Angeles (which includes the Central Business District) and destinations farther west, as well as destinations farther south in the Gateway district. Despite this, the project area still accounts for seven percent of all jobs in Los Angeles County. Transit improvements in the project area can capture multiple travel markets. There exists both a pull to jobs in the project area and a push toward regional employment centers in Southern California. An investment in transit in the project area would help alleviate the congestion that currently exists both entering and leaving the area. Figure 6-5 illustrates the projected employment growth in the project area between 2010 and 2035. Figure 6-6 provides the same information for Los Angeles County.





Source: U.S. Census 2000, SCAG projections 2010. Graphic prepared by CDM/AECOM Joint Venture, 2010

Figure 6-5. Employment Growth for Project Area 2010-2035



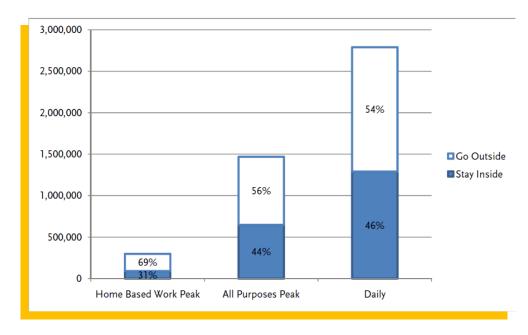
Source: U.S. Census 2000, SCAG projections 2010. Graphic prepared by CDM/AECOM Joint Venture, 2010

Figure 6-6. Employment Growth for Los Angeles County 2010-2035



6.5 Travel Demand and Patterns

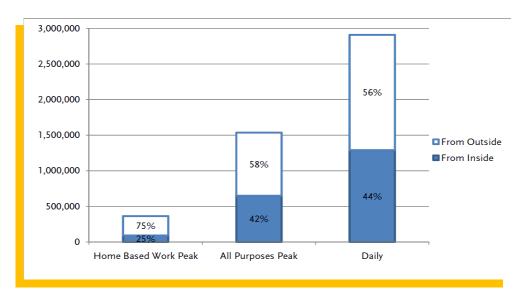
As discussed in Section 5.2 above, there exists a unique demand both within the project area and to/from other districts within the region. Rather than suburban patterns of travel, which typically consist of one directional movement to and from job centers and bedroom communities, the travel patterns of the Eastside Transit Corridor Phase 2 project area suggests movement within and outside the project area (see Figures 6-7 and 6-8). This is due in large part to a population comparable to the size of other U.S. cities, as well as the many activity centers, destinations, and employment centers that exist within the project area. The following sections summarize the travel markets that generate trips produced in and attracted to the project area.



Source: Metro Travel Demand Model: prepared by CDM/AECOM Joint Venture, 2010

Figure 6-7. Person Trips Produced by the Project Area, Year 2035





Source: Metro Travel Demand Model; prepared by CDM/AECOM Joint Venture, 2010

Figure 6-8. Person Trips Attracted by the Project Area, Year 2035

6.5.1 Daily Trips

As indicated in Section 5.2.1, the project area produced and attracted approximately 3.7 million all-purpose trips in 2006. This is expected to grow to 4.4 million daily trips by 2035. Nearly half (44 percent) of these trips stayed within the project area; this is projected to remain true through 2035. See Figures 6-7 and 6-8 for a summary of all project area trips.

The remaining trips originating in the project area were to popular destinations in adjacent districts to the west, southwest, as other parts of the region. In 2006, these districts included Central Los Angeles, Gateway, and West San Gabriel Valley. The trend in trips to these top destinations is projected to continue through 2035. Similarly, these three districts also produced, and are expected to continue to produce, a large share of trips attracted to the project area in both 2006 and 2035. These trends reinforce the top travel markets for trips produced in and attracted to the project area. Tables 6-1 and 6-2 summarize the most popular destination and origin districts for the project area.



Table 6-1. Top Destination/Origin Districts for Project Area, Year 2006 Daily Person Trips

Daily	Rank	1	2	3	4	5
Top Districts to Attract Trips Produced by the Project Area	District Name	Project Area	Central Los Angeles	Gateway	West San Gabriel Valley	East San Gabriel Valley
	Trips	1,060,750	326,004	296,500	208,446	126,070
	Percent	45%	14%	13%	9%	5%
Top Districts to Produce Trips Attracted by the Project Area	District Name	Project Area	Gateway	West San Gabriel Valley	Central Los Angeles	East San Gabriel Valley
	Trips	1,060,750	343,817	259,319	216,733	155,471
	Percent	44%	14%	11%	9%	6%

Source: Metro Travel Demand Model, prepared by CDM/AECOM Joint Venture, 2010.

Table 6-2. Top Destination/Origin Districts for Project Area, Year 2035 Daily Person Trips

Daily	Rank	1	2	3	4	5
Top Districts to Attract Trips Produced by the Project Area	District Name	Project Area	Gateway	Central Los Angeles	West San Gabriel Valley	East San Gabriel Valley
	Trips	1,290,489	330,223	304,499	245,203	163,816
	Percent	46%	12%	11%	9%	6%
Top Districts to Produce Trips Attracted by the Project Area	District Name	Project Area	Gateway	West San Gabriel Valley	Central Los Angeles	East San Gabriel Valley
	Trips	1,290,489	360,447	300,253	293,410	193,575
	Percent	44%	12%	10%	10%	7%

Source: Metro Travel Demand model; prepared by CDM/AECOM Joint Venture, 2010



6.5.2 Transit Trips

In 2006, the project area produced and attracted a total of approximately 114,000 all-purpose transit trips. This is projected to increase by 26 percent to 145,000 by 2035. Figures 5-5 and 5-6 illustrate travel patterns for transit trips to and from the project area.

Approximately 26 percent of transit trips that originated in the project area remained in the area. This proportion is projected to increase to 32 percent by 2035. This reinforces the need for transit improvements within the project area to capture both local and regional travel markets.

In 2006, the most popular destination for the remaining 74 percent of transit trips destined outside the project area) was Central Los Angeles (which includes the Central Business District), accounting for more than 30 percent of transit trips outside the project area and producing a major east-west travel pattern. This occurs in large part because these two districts serve as regional employment centers for Southern California.

The top production districts for transit trips to the project area include the Central Los Angeles, Gateway, and West San Gabriel Valley districts. These districts are already connected to the Metro Rail system with transit investments such as the Metro Gold Line to Pasadena, Purple Line to Wilshire/Western, Green Line to Norwalk, and Blue Line to Pasadena. There exists a need to connect potential travel markets originating and ending in the Eastside Transit Corridor Phase 2 project area to the rest of Los Angeles County.

6.6 Summary of Travel Markets

Current travel demand is expected to increase 32 percent by 2035 for the Eastside Transit Corridor Phase 2 project area. Various travel markets exist that would continue to contribute to and benefit from a transit investment. As discussed in Section 5.2, potential travel markets were identified by an analysis of the concentration of activity centers in the project area; projected population and employment growth; and the forecast increase in daily trips and transit trips to and from the project area.

These are summarized below:

- Trips Produced/Attracted to the Project Area- The project area attracted and produced approximately 3.7 million all-purpose trips in 2006. This is expected to grow significantly to 4.4 million daily trips by 2035. In 2006, a large share of these trips remained within the project area (45 percent) a condition that is projected to continue. Population and employment growth are contributing factors.
- Transit Trips Produced/Attracted to the Project Area- in 2006, the project area produced or attracted a total of 114,000 all-purpose transit trips, and 26 percent remained within the project area. This is forecast to increase to 32 percent by 2035. This trend can be attributed to the activity centers within the project area.



- Trips from Project Area to Outside Districts- According to 2035 projections, approximately 50,000 daily trips will be generated from the project area to Central Los Angeles and the Central Business District.
- Trips from Outside Districts to the Project Area- A large percentage of both daily trips and transit trips originate in the top three trip-producing districts: Central Los Angeles, Gateway, and West San Gabriel Valley.

These travel patterns reinforce the need for strong east-west and north-south connections that capture travel markets moving between the project area and other districts currently served by the Metro Rail system in Los Angeles County.



7.0 SUMMARY OF PURPOSE AND NEED

In summary, travel forecasts and population and employment projections--as well as analysis of land use, activity centers, and transit-dependent populations--reinforce the need for a transit investment in the Eastside Transit Corridor Phase 2 project area. Furthermore, research prepared by SCAG and Metro identify the need for transit investments throughout Southern California, specifically in Los Angeles County, that meet federal and state mandates to increase mobility and improve air quality in the region.

The project area is faced with travel challenges, including mounting freeway and arterial congestion and increasing travel times. By 2035, average travel speed is expected to decrease in the project area by 18 percent in the AM peak period and 24 percent in the PM peak. As a result, commuters will experience increased travel times. Estimates for 2035 suggest that travel time will increase by 25 percent in the AM and 34 percent in the PM peak. These conditions will impair travel for both auto commuters and bus riders. Currently, bus service is the predominant transit alternative for travelers to and from the project area. However, as travel times increase and speeds decrease, the efficiency of bus service will decline.

Current and future travel patterns indicate a large amount of movement both within the project area and to top regional destinations in adjacent districts. In 2006, there were approximately 3.7 million all-purpose trips to and from the project area. This number is estimated to increase to 4.4 million by 2035. In 2006, 45 percent of these trips remained within the project area, and many of the remaining 55 percent were to and from major regional destinations currently served by the Metro Rail system, such as the Central Los Angeles, Gateway, and West San Gabriel Valley districts. This split reinforces the need for a transit alternative to serve the project area internally, as well as regionally--connecting jobs, retail, entertainment, and educational institutions throughout Los Angeles County.

A number of factors contribute to the high level of travel demand both in the project area and to adjacent districts. High population and employment densities along with the concentration of activity centers, continue to strain the transportation network. Forecasts suggest increases in both population growth and transit demand by 2035. The population of the project area will increase 12 percent, reaching approximately 808,000 people, while transit demand is projected to increase approximately 19 during the same period.

There also exists a current need to provide transit solutions that meet the demands of transit-dependent communities and transit users within the project area. Based on 2000 Census data, 42 percent of the project area population is either over the age of 65 or under 18. These populations represent age groups that tend to rely more heavily on public transit than the general population. Additionally, 19 percent of households in the project area are considered low-income, compared to the Los Angeles County average of 17 percent. Further, 16 percent of households do not own a car, compared to 13 percent countywide. As population density and congestion increase in the project area, the demands of transit-dependent populations and transit users looking to find a reliable alternative to the automobile will increase correspondingly.



As studies have suggested, there exists a strong relationship between redevelopment, revitalization and transportation system improvements. Increased accessibility, mobility, and transit linkages offer opportunities for economic development. Various jurisdictions in the project area understand the importance of this relationship and have developed, or are in the process of developing, transit-supportive land use policies. In addition, there are a number of planned redevelopment projects and existing activity centers located in areas that could leverage a transit investment and increase economic opportunities. These projects and the area's economic future would benefit from economic opportunities resulting from connections to local and regional transit networks within Los Angeles County.

Without significant improvements to increase capacity to meet existing and future demand, the project area's transportation network will be substantially overburdened and mobility further constrained. Furthermore, limited connectivity to the Metro rail transit system impairs travel to and from the project area. There is a pressing need to improve transportation mobility and reliability in the project area.

The purpose of the Eastside Transit Corridor Phase 2 Project is to improve the transportation network and meet the needs of the project area by providing a convenient and reliable high capacity transit alternative. The proposed project would address these needs by increasing capacity, providing a higher speed mobility option, and connecting the project area to the rest of the Metro rail network, including the Gold Line to Pasadena, Blue Line to Long Beach, Green Line to Norwalk, and Red and Purple Line subways, via the Eastside Extension Phase 1.



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